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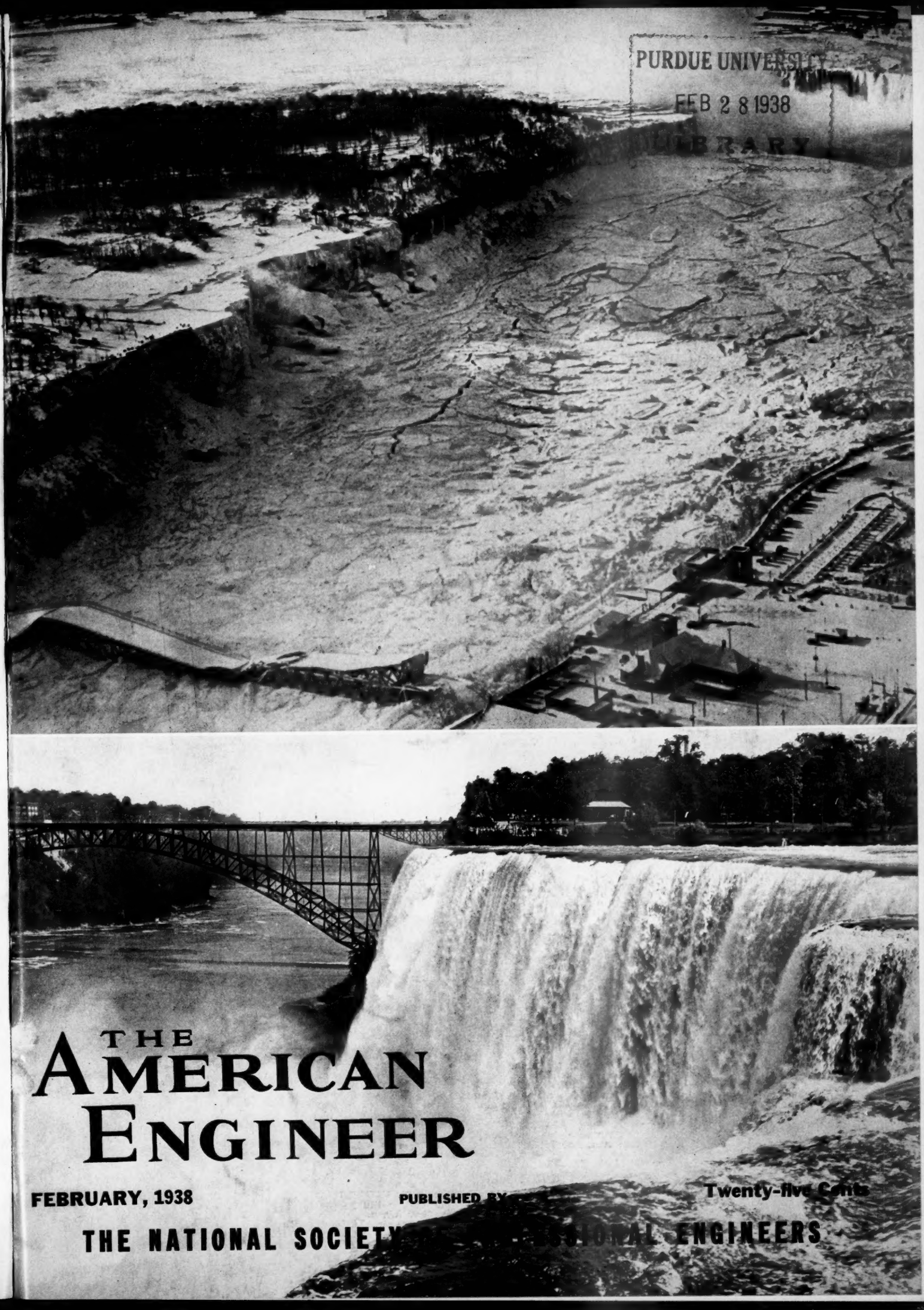

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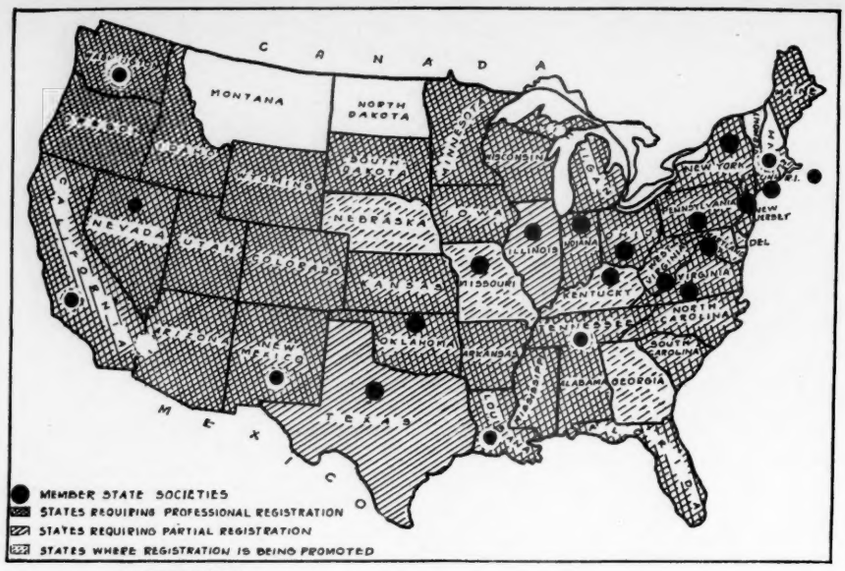

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Courtesy Acme Newspictures, Inc.

THE COVER—"Before and After" might be the popular title for our February cover, but to the Professional Engineer it would more fittingly be termed "Cause and Effect". It is apparent that in the future bridge engineers will have to give serious consideration to the seemingly impossible heights to which ice jams may build themselves. Surely few bridge designers of forty years ago would have even imagined such a depth of ice as was piled up in the Niagara Gorge.

THE AMERICAN ENGINEER will from time to time attempt to record on its cover major incidents of national and international character so that files of the magazine in the future may be a picture record of such events. We will be glad to receive from our members suggestions as to covers, and if you care to send us photographs which you think may be of interest, we would be happy to receive them.

The American Engineer assumes no responsibility for statements or opinions expressed by contributors. Their names identify the source of the same.

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EDITORIAL . . .

FUNDAMENTAL

You are enthused about the "Professional" movement — you have encouraged your friends to join with you in your local Chapter — you took an active part in Chapter activities and paid your last year's dues — and have just paid this year's. But you are a little confused as to how you fit into the scheme of things — what part of the cog wheel—of the driving gear you are.

Well, you are an essential integral part of the whole. If you fall down the machine stops running.

ORGANIZATION — the National Society of Professional Engineers is made up of twenty-two member State Societies (there will be more soon) — each member State Society having complete autonomy — a self contained unit which stands on its own feet — operated by its own revenues received from dues of its own members. Each State Society elects a Director to the National Society. These directors meet regularly in Washington on the call of the President, (the office of the National Society is the National Press Building) and with the other officers, conduct the National Society's business, fix its budget and determine its policies. The National officers are elected annually at a convention held under the auspices of one of the State Societies (the most recent by New York, the next by Pennsylvania at Pittsburgh this Fall) The National Society receives its monies from the several State Societies, a portion of each member's dues being paid into the national treasury.

STATE SOCIETIES — A State Society of Professional Engineers is made up of County Chapters, each chapter electing a Director to the State Society. Officers are elected at annual conventions and the officers and directors conduct each State's business.

CHAPTERS — Each chapter elects its own officers and directors, conducts its own business and functions on matters of State-wide interest only through the State Society, and not independently or direct. In matters of local interest it functions directly.

OUR PURPOSE — We are "organized to do for the Engineering Profession what the Medical Association and the Bar Association have done for their respective Professions in increasing prestige, legal protection, public confidence, and professional recognition" (from "Accomplishments and Objectives" in Hand Book Issued by New York State Society).

There are certain, simple fundamental principles that will hold this together and constantly make us stronger. If each member follows them to the best of his ability, having them fit into the general scheme of his relationship to the Society, he will obtain a joy from his membership and will be doing a constructive job:

1. Pay dues promptly when billed.
2. Have regular Chapter Meetings and attend them.
3. Participate in the Chapter's activities.
4. In general, such activities should pertain to the professional betterment of members and not the technical.
5. Take an active Chapter interest in civic, social and governmental affairs but avoid giving technical advice.
6. Cooperate with legal, medical, architectural, accounting and other professions on matters of common, social and professional interest.
7. Encourage and promote adequate compensation for the engineering profession.
8. Advocate and foster constantly better registration laws toward the end of a common model law.
9. Actively increase the number of members in your own chapter and sponsor new chapters in fertile territory.
10. Let those with whom you come into contact know you are a Professional Engineer and encourage others to register.

If these ten simple rules are followed, the profession will be advanced and our National Society will grow and prosper.

ROBERT HALL CRAIG

NATIONAL SOCIETY NEWS

HANDS ACROSS THE SEA

AMERICAN ENGINEER
Special Subscription—Foreign
January 8, 1938

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Department Foreign & Colonial Technics (W)
German Engineers Association (VDI)
Berlin NW 7 Germany Hermann-Goring-Str. 27

Fellow Engineers:

Responding to yours of December 13, under separate cover we have forwarded to you a complete set of the AMERICAN ENGINEER for the years 1936 and 1937, together with the following material:

1. One-half doz. copies of booklet entitled, "A Professionally Minded Engineer" which includes a statement of the objectives of the Society together with copy of its constitution.
2. Copy of a booklet entitled, "Accomplishments and Objectives," issued by our New York state unit.
3. Copy of the model law for registration of professional enginners and land surveyors.
4. Copy of paper entitled, "Engineering Education" by our past President—D. B. Steinman.
5. One-half doz. copies of resolutions adopted at our last annual convention.
6. One-half dozen copies of paper entitled, "Professional Engineers and the Union Issue."

The National Society of Professional Engineers is the only engineering society in the United States that restricts its entire membership to legally recognized practitioners, and fills the same position in the engineering profession as does the American Bar Association and the American Medical Association in their respective professions.

It was organized in 1934 and became a going concern in January 1935, having at that time associated with it eight state societies of professional engineers. Subsequently we promoted and organized additional state societies so that at the moment there are twenty state societies of professional engineers affiliated with N. S. P. E. Membership in the National Society is obtained only through the County Chapters of our State Societies, and the state society organizational structure follows essentially the political structure of that particular state.

We would be glad to enter your subscription for the AMERICAN ENGINEER, the cost of which for foreign subscription is $2.50.

If we can be of further service to you please do not fail to call on us.

With sincere greetings to the engineers of Germany, I am

Cordially yours,

Willard S. Conlon,
Executive Secretary.

Dear President Sheridan:

As you know I attended the Annual Meeting of the New Jersey Society of Professional Engineers, witnessed the inauguration of President Victor Gelineau and heard his splendid address.

The official notice of his election from New Jersey Society of Professional Engineers arrived in this morning's mail as did the announcement of his untimely death, made by the Board of Commerce and Navigation and which, for your information is quoted herewith:

> It is with regret that we inform you of the death of our late Director
> VICTOR GELINEAU
> who passed away suddenly on Friday Morning, January 21, 1938
> Board of Commerce and Navigation.

This was indeed a shock. The New Jersey Association of Professional Engineers and the National Society of Professional Engineers have suffered a great loss.

Signed: WILLARD S. CONLON.
National Secretary.

BOARD OF DIRECTORS MEETING

President Arthur V. Sheridan has called a meeting of the Board of Directors of the National Society of Professional Engineers to be held at the National office in Washington, D. C., Saturday, February 26, at 9:30 A. M.

The agenda for this meeting includes the following:

1. Further consideration of the budget and finances.
2. Confirmation of Charters issued to State Societies.
3. Consideration of resolutions from several State Societies.
4. Consideration of ways and means for effectuating the policies as approved by the Joint Conference of the Professions.
5. Determination of N. S. P. E. policies with respect to certain matters pertaining to Legislation, Public and Professional Relations.
6. Consideration of ways and means of further consolidation of our organizational structure.
7. Formulation of plans for the 1938 Convention.

N. S. P. E. will assume the usual expenses of the delegates while in Washington, and we trust that the State Societies will find ways and means to finance the traveling expenses of their Directors, as unfortunately N. S. P. E. is not in a position to assume this obligation.

WILLARD S. CONLON,
Executive Secretary.

PRESIDENT SHERIDAN APPOINTED BY MAYOR LAGUARDIA AS A MEMBER OF NEW YORK'S CITY PLANNING COMMISSION

(From the New York Herald Tribune)

Mayor F. H. LaGuardia announced the appointment recently of five members of the new City Planning Commission, which, under the new charter effective January 1, is one of the most powerful bodies in the municipal set up.

The appointments include: Arthur V. Sheridan, chief engineer for James J. Lyons, Borough President of the Bronx. Mr. Sheridan is forty-nine years old, unmarried, and lives at 3875 Waldo Avenue, the Bronx. He is a graduate of the City College of New York and an experienced engineer. Mr. Sheridan is a founder and president of the National Society of *Professional* Engineers, and once taught at the Stevens Institute of Technology, Hoboken, N. J.

The charter provides for six city planning commissioners, but the Mayor, when making

ARTHUR V. SHERIDAN
President, National Society of Professional Engineers

his announcement, said that he had eliminated one post because he did not consider that it was required now. Vernon S. Moon, acting chief engineer of the Board of Estimate, will also serve on the commission, as an ex-officio member.

"Mr. Sheridan is the engineering member of the body, and Mr. Salmon is the architect. Mr. Rodgers has wide acquaintance with city problems, particularly in the field of transit and tunnels and traffic, and Mr. Orton will be the 'master mapper' of the organization."

Although the charter, which specifies an eight-year term for city planning commissioners, provides a staggered system of appointment for the first commissioners, the Mayor had not decided on the length of

(Continued on page 7)

The Engineering Profession*

Not what the Engineer does, but how he does it differentiates engineering from the other learned professions

By **GANO DUNN, Past-President AIEE**

Reprint from "Electrical Engineering"

The Advent of the scientific method and the rapid spread of its use in connection with practical things, which began not much more than 150 years ago, called forth the ministrations of many specialists in the application of science to social purposes. There always had been military engineers who made roads, bridges, catapults, and petards; but in the sense we are now considering it, they did not constitute a profession.

To distinguish the new men from these time honored military engineers, they were called civil engineers. In those days civil engineers busied themselves in the whole field of then known science instead of in the narrower field which civil engineering now embraces. James Watt, for instance, was a civil engineer. These civil engineers, as distinguished from military engineers, began to constitute a new class in the community; this class has grown in geometrical ratios as to its numbers and as to the varieties of its occupation, until it has spread its activities into every material department of life. The very foundations of society would be shattered if the class should today cease to exist.

Specialization in this great and growing class has created over 50 branches of engineering sufficiently distinct to be recognized in library catalogs. Because of this growth in scope and subdivision into widely different specialities, occupations in the various engineering branches have become so differentiated that the extremes bear almost no resemblance to each other. Even the grand divisions of the engineering profession represented by the national societies of civil, mining, mechanical, electrical, and chemical engineers, give little more than a hint as to occupation. An electrical engineer may spend his days on the microcosmic problems of corona in the long-distance transmission of vast amounts of power, or he may wrestle with the microcosmic subtleties of the multiplex modulation of carrier waves. As an indication not only of this diversity of occupation but of the rapidity with which change of subject matter has taken place, I will give a few examples.

It is within my time that power transmission did not exist. The electrical engineer of that day, in one group was concerned with the intricacies of direct-current commutation or with the then still unsuccessful endeavor to produce an electric motor that would run on alternating current, which was at that time a novelty limited to the field of electric illumination. In another group he was estimating the economic barrier represented by the cost of 2-wire metallic circuits for telephones, and cogitating whether the priority which telephones shared with the telegraph in the exclusive use of circuits of a single wire with increasingly noisy ground returns was worth the expensive legal fight its preservation was forcing upon him. In another field the coherer was unconscious of the vacuum tube that was to follow.

Mechanical engineers in their sphere burned midnight oil developing a reciprocating steam engine that would run at a speed high enough for the direct driving of electric generators, in order to make possible the elimination of the grave disadvantages of the ubiquitous leather belt. The successful internal combustion engine and a useful steam turbine had not been born.

I could go on, but trust that I have indicated that the progress of the engineering art in the past already has demonstrated the folly of attempting to forecast in the electrical field alone what will occupy the electrical engineer of 150 years hence.

It is possible that I already have gone far enough to have suggested what it actually is that constitutes the practice of the engineering profession and sets it apart from the other learned professions. The answer is: it is not what the engineer does, but how he does it! Not what the engineer's occupation is, but the intellectual processes by which he attacks that occupation.

In other words the method of engineers rather than their occupation is the characteristic of the engineering profession. Method is the common denominator of all engineers. While the *subject matter* of engineering unquestionably will continue to change in the future, not so with the *method of engineering.* It is certain that the engineer of the future will be using the present method 150 years hence, even if no prescience is capable of forecasting to what occupations that method will be applied.

What is this remarkable method that has changed the nature of the world? As is well known, it is the method of science—that process of reasoning based upon observed data and working hypothesis which, by inductive and deductive procedure and experiment, arrives at new knowledge.

It must be pointed out that, except where their qualities are combined, the engineer and the scientist are not the same person, however, much they use the same method. Their objectives are different. Many attempts have been made to define engineering, and engineers do not agree on any one definition; but a definition I worked out some years ago seems to stand the test of criticism and of per-

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* Essential substance of the commencement address delivered at the 70th graduation exercises of the Massachusetts Institute of Technology, Boston, June 8, 1937.

GANO DUNN has been president of the J. G. White Engineering Corporation, New York, N. Y., since 1913, and is also president of Cooper Union for Advancement of Science and Art, New York, N. Y. He has received the following degrees: bachelor of science (1889) and master of science (1897) from the College of the City of New York; electrical engineer (1891) and master of science (honorary, 1914) from Columbia University. Mr. Dunn is a life member of the AIEE, and in addition to having served as president of the Institute in 1911-12, he has served on many Institute committees over a period of more than 20 years. He was president of the New York Electrical Society, 1900-02, and of the United Engineering Society (now United Engineering Trustees) 1913-16; he also served as chairman of The Engineering Foundation, 1915-16, and of National Research Council, 1923-28. He is a member of many other engineering and allied organizations, and has served as a director of the American Society of Mechanical Engineers and of the American Society of Civil Engineers, and as honorary secretary for the United States of the British Institution of Electrical Engineers. He is the author of various papers on electrical and engineering subjects.

spective. It is as follows: Engineering is the art of the economic application of science to social purposes.

Being an art, engineering thrives on repetition. It develops skill and it develops style. The second and third power plants that an engineer builds are likely to be better than the first, although there may not have been introduced a single new principle. The scientist, however, shuts his mind as far as possible to all human prejudice and influence of feeling, save only for the divine fire of that imagination which creates the working hypothesis; and he learns how to discern truth and new knowledge in a study of the order of nature.

The engineer, by the same intellectual processes as the scientist, applies that new knowledge to social service. The essential difference between the scientist and the engineer lies in the economic involvment of the engineer's work. In this hot crucible of the economic test all that an engineer does must be tried. To repeat an old saying, an engineer is a man who can do with one dollar what any fool can do with two; and it is in his economic involvement that the engineer can rise to some of his greatest powers.

Economics is a social not a physical, science. It embraces problems of the human spirit and the behavior of man as man; and because the engineer's art deals with dollars and economic relations, he is bound into the great business structure of society in a way that the scientist is not. Being bound into this structure, he must be a man among men. He must be able to make his views prevail. He must be able to persuade and to contend. He must be able to give blows and to take them. These activities do not devolve upon the scientist in his laboratory. To the engineer, they are everyday life.

If an engineer's training neglects the great human mirrors of history and languages, particularly his own language; if his mind and heart are not sensible to the great social forces of his day and of his community; if he but feebly develops the subtle qualities of character that make for personality, his career as an engineer is limited, no matter how much science he may know.

If the key to the scientist is thought, the key to the engineer is action. Value and utility are the engineer's criteria, rather than truth, which is the criterion of science.

For these reasons, as the engineering profession has developed, the center of education for engineers has been shifting, more toward the humanities. This is one reason for the greater part engineers constantly are playing today in the great roles of life. But while the humanities are of profound and increasingly recognized importance in the arch of an engineer's education, its keystone always will be science.

Not all men with an engineering education take up the practice of engineering. It is significant how many are drawn off into the field of organization and other fields, where the engineering method of approach to problems and the engineering point of view introduce fermenting leaven into many of the processes of traditional business procedure. Partly for this and for other reasons, engineering has become the cornerstone of industry. In the precipitations of relationships brought about by big business and mass production the function of management has fallen very largely to the engineer.

In the field of management, involving the play of the human spirit at its best and at its worst, where, particularly in labor relations, generosity, loyalty, and independence are manifest as well as passion, ignorance, and vanity, the engineer's capacity for organization, leadership, and sympathy has rare opportunities. Even in these days which we often think to be so far advanced, the sway of prejudice and of certain kinds of superstition is still profound. It awaits the light of reason and human understanding.

Executions for witchcraft were once a common part of everyday life. At the time when Salem shocked the colonies by a series of 19 such executions, literally thousands of witchcraft executions every year were carried out in Europe. Over a period of 40 years there were 8,000 such executions in intelligent Scotland alone. The least unusual circumstance or unexplained phenomenon was liable to be charged to occult and demoniac causes, and constantly brought the penalty of death by flames upon upright and innocent persons or upon individuals who were unpopular or politically inconvenient, or who were merely intellectually independent. This madness, which had spread over most of the civilized world, was dissipated by the same great light that founded the engineering profession. About that time the dawn of the scientific method began to shed its beams of intelligence into the darkness of human prejudice. The results it accomplished in the social sphere through the dissipation of superstition, although overshadowed by the results in the sphere of the material world, have been of immeasurable importance.

The social sphere today is still a field that needs the light, a field in which the engineer with his training and point of view has open to him doors of rare opportunity. While not as sinister as the witchcraft problems, there are problems of prejudice in our social field that are, like witchcraft, based upon distrust and ignorance—problems that act as a brake on industry and separate man from man.

While I have dwelt upon the essentially economic character of the engineer's field and the social service rendered by him in the cultivation of that field, such social service is an indirect one, effected by his function rather than by a disinterested will to serve. For performing his function he receives compensation, and therefore it often is urged that he is not entitled to personal credit for social service, since he is paid for it. In the case of certain engineers, there is much weight in this criticism. It also is urged that much of an engineer's work comes under the head of business for which the professional status cannot be claimed, and that the only really professional engineer is the consulting engineer; who, it must be admitted, is usually an ornament to the profession and perhaps more conscious of a professional responsibility than many of his fellow engineers.

Similar questions have beset the older professions; and they have been worked out in a tolerably satisfactory way. No lawyer considers it a reflection, especially an ambitious young lawyer in a country district, to be referred to as conducting a law business; nor does a lawyer consider that he is not a member of the legal profession if he accepts an annual salary from a corporation for continuous service. Equally unaffected as to his professional status is the physician who works for a salary as distinguished from fees for general practice.

The essence of the professional status lies in the moral obligation involved in the act of professing. This act is always personal; and it is in the engineer's personal relations to his fellows and to society and the obligations therein involved, wholly over and beyond obligations for which he is compensated, that his professional status resides.

These moral obligations are the reasons why such particular weight is put upon character and integrity by the boards of examiners of the great national engineering societies before admitting to membership, and why violations of professional ethics rather than failures in profes-

sional competence have been practically the only grounds on which expulsions from these societies have been based.

Turning to the older professions for our models, we find that questions of personal obligation to fellows and to society constitute the very foundation of the professional conception. In these older professions the engineering profession has noble examples of the practice of obligations that are self-assumed and disinterested. The medical profession has its Hippocratice oath peculiarly pledging its novitiates to the service of mankind irrespective of compensation. The legal profession, in its defense of penniless defendants and the vast amount of uncompensated service it renders to the courts and to the public as an arm of the law, illustrates its conception of professional service outside the field of compensation. As to the clergy, its objective is exclusively social, and its devotion is unmeasured by compensation.

Engineers themselves have been the first to recognize obligations that inhere in a growing consciousness of the professional status. Their great societies have been created not merely for self-education and intellectual development, but to give expression, in their relations with each other, with other professions, and with the public, to a desire for a standard of personal relations and for the recognition of obligations, beyond those which are pecuniary. Just as the peculiar equipment of the clergyman, the lawyer, and the physician gives him a peculiar power and authority when disinterestedly devoted to social betterment, so does the equipment of the engineer.

The engineer today finds himself in a pivotal position in industry, intermediate between capital and labor, with the problems of both of which he deals intimately and is in a position to understand, interpret, and judge. In consequence, there is offered to him entirely in addition to the service he performs through his engineering function, an opportunity for social service through his professional and personal status which, if he rightly conceives and seizes it, gives him a strategic advantage to render social service, which at this moment, the representatives of the older professions do not possess.

Is it too much to hope that with an enlightened method of approach and the habit of factual investigation which are the intellectual birthrights of the engineer, his increasing participation in management may bring to the solution of some of the social problems of industry a prejudice-dissolving light? Such a light is capable of showing the path to a new happiness in work, in which there is a recompense greater than all wages—joy in the act of creation. If there could come about a spirit of reciprocal confidence on the part of all elements, we could not fail to see increased production and increased leisure go hand in hand, securing those satisfactions deep in the consciousness of all Americans, which the immortal Declaration of Independence describes as the inalienable rights of life, liberty, and the pursuit of happiness.

To seize these opportunities for social service necessarily involves a demand upon the souls of engineers as well as upon their minds, which will be a test of their love of their fellow man. It is a case of *noblesse oblige*. Every engineer certainly will have some occasion for meeting this test. When and as often as the test shall come, may none ever ask, in the words of Cain, "Am I my brother's keeper?" unless he already has resolved in his heart the intention to answer "I am."

Sensible and Sound Attitude on Engineering Practice by College Faculty in Ohio

Contact by the University teacher with the practical problems in his field of specialization is indispensable to the highest effectiveness of the teacher in his University work.

It vitalizes his teaching and provides helpful opportunities for his students. It not only maintains and develops his professional competence but also stimulates and encourages his reseach activities on the advancing frontiers of knowledge. Only through such contact, in a service relationship, may the University meet proper demands, both public and private, for assistance which the University is uniquely equipped and staffed to perform in the far-reaching public interest.

The integrity of a properly safe-guarded program of research and consultant relations with business and industry, with governmental bodies, with other educational institutions and systems, and with institutions privately maintained for the public benefit, is recognized by every leading institution of higher learning in the land.

For these reasons, the Board of Trustees of the Ohio State University adopts the following regulations:

I. Full-time regular members of the college faculties may render professional and technological services in the public interest to individuals, groups, associations and societies, departments of government, business and industrial firms, and others—and may receive compensation therefor from those served—under the following terms and conditions:

1. In no case shall such outside employment interfere with the specified regular University duties and the effective service of the staff member. The nature of such outside employment, the estimated duration of the work, the estimated time required to perform it (in terms of hours per week, or per month, or per quarter) and the name of the employer for whom the work will be performed shall be on record in the office of the Dean of the College to whom the staff member is administratively responsible; and in all cases, in the office of the President.
2. Only such outside service for compensation shall be undertaken as will help to maintain and increase the professional competency of those so engaged. Decision of the appropriate Dean, subject to review by the President, shall be controlling upon this point. Routine and repetitive tasks of a commonplace type are not approved, but the occasional delivery of lectures, expert advice or consultation, not readily obtainable except at the University, is not prohibited.
3. No member of the University staff may solicit outside professional or technological work in competition with regularly established private practitioners of such work or firms in private practice (viz., licensed engineers, testing laboratories, etc).
4. Compensation received for such outside services shall not be less than the prevailing scale of fees and charges for similar service in private practice.
   e.g., The schedule of fees adopted and approved by the Ohio Society of Professional Engineers, dated February 13, 1937, shall be regarded as "the prevailing scale," in engineering practice.

II. The University buildings, grounds and equipment are provided by the State and federal governments and by private gift for instruction, research and public service.
All arrangements for the use of University facilities and space in the prosecution of research, testing and consultant work with financial cooperation from outside the University, except under contract as between the University and the Ohio State University Research Foundation, or upon other proposals (such as fellowships) duly approved by the Board of Trustees, shall be approved in advance by the department chairman, the appropriate Dean or other administrative superior, the Business Manager of the University, and the President. Such arrangements, moreover, shall be subject to a reasonable fee for the privilege enjoyed. It shall be the duty of the Business Manager to prepare, in conference with the departments concerned, a schedule of such fees for the use of space and facilities.

III. No member of the University staff shall accept employment which shall bring him as an expert, consultant, investigator or in any other capacity into antagonism to the interests of the State of Ohio; and no member of the staff shall undertake, except with express approval of the President, any outside work to be paid for from state funds.

IV. The University cannot assume, and must not be placed in the position of assuming, any responsibility for private, professional or technological services rendered by members of the staff.
When a member of the staff does work in a private capacity he must make it clear to those who employ him that such work is unofficial and that the name and authority of the Ohio State University are not in any way, by publicity, advertising or otherwise, to be connected with the service rendered or the results obtained.
University stationery and postage shall be used only in correspondence or reports relating to official University work.

TRIBUTE

From the Dallas, Texas News

Texas recently enacted a registration law for *professional engineers*, a regulation that those who follow the calling have long felt ought to be in force for their own and the public's protection. Texas engineers have had another sentiment in the matter. They have felt very definitely that there ought to be a particular leader in the profession to whom Certificate Number One could be presented.

So it is that here tonight, the North Texas Engineers get together. They have certificate number one all ready for the man in whose name it is made out. For eighty years he has observed our world through kindly eyes and has given it the sunlight of his genial personality, the benefit of his knowledge and his training. For fifty of those eighty years, he has built up Texas engineering, teaching young men, some of whom are now becoming old men, the ins and outs of a great profession. Today he is eighty years young.

He is Thomas Ulvan Taylor, dean emeritus of the engineering department of the University of Texas. Dean Taylor is a member of the Texas Society of Professional Engineers and the National Society of Professional Engineers.

PRESIDENT SHERIDAN APPOINTED

(Continued from page 3)

service of each member. It was learned that he would consult the members and find out how long they wish to remain on the commission before he announced who was appointed for the shortest time, two years, and the longest, eight years.

According to the charter, the Mayor was required to appoint "engineers, architects, experts and other officers" to the commission, which will also have a technical staff as soon as it is organized. Mr. Berle said that he would try to call a preliminary meeting of the commission, to discuss procedure and to decide on a plan of organization so that the body could begin hearings on capital improvements at once.

The chief function of the commission will be to prepare a master plan of the city, which will include not only streets, bridges, parks, public places and transportation facilities, but the co-ordination of such facilities in a plan which will furnish the most convenient means of travel among residential and work and recreational centers.

The planning commission also is the guardian of the official city map, which was formerly controlled by the Board of Estimate. This function of the new body will relieve the board of much of the routine on its calendars, and will save time generally. With twelve affirmative votes, the board may still over-rule the commission on map changes; but again this is considered not to be a likely occurrence under the present set-up.

In two other ways the commission may show its power. If an assessable improvement is recommended by the president of a borough or by the board, it must be submitted to the planning commission for a report based on its relation to the master plan and the city map before the board may taken final action upon it. The board requires twelve affirmative votes to over-rule the commission. In addition, the commission's right to prepare the capital outlay budget is believed to be a powerful weapon to guide the growth of the city along the proper lines.

Proposed Constitution and By-Laws for the Virginia Society of Professional Engineers

A Model Constitution for State Societies

PREAMBLE

CONCERNED with the Public Weal, and

IN ORDER to safeguard life, health, and property, by restricting the practice of Engineering to properly qualified persons;

LIKEWISE, to advance the welfare of the Engineering Profession by the establishment and observance of high ethical standards of conduct, and through sponsorship of the creation and enforcement of adequate license laws and practice acts;

ALSO, to place the control of engineering projects within the scope of such laws and acts;

FURTHER, to focus public attention upon the professional standing, functions, requirements, and accomplishments of engineers;

WITHAL, to sponsor and promote honorable procedure tending toward recognition commensurate with the dignity and responsibility of this profession, THE VIRGINIA SOCIETY OF PROFESSIONAL ENGINEERS, has been organized; and to such ends the Constitution, of which this preamble is a part, is herewith set forth.

This Society subscribes to the aims and purposes as set forth in the Preamble, Constitution and By-Laws of the National Society of Professional Engineers. In order to aid in advancing these ideals in Virginia this Society accepts a charter from the National Society, subscribes to the provisions of the National Society Constitution, and herewith sets forth its Constitution and By-Laws of which this Preamble is a part.

CONSTITUTION

ARTICLE 1

NAME

Section 1. This Society is a member State Society of the National Society of Professional Engineers, and shall be known as the Virginia Society of Professional Engineers.

ARTICLE II

HEADQUARTERS

Section 1. The Principal office shall be located in such Town or City of Virginia as may be selected by the Executive Board, and shall be designated as State Headquarters.

ARTICLE III

MEMBERSHIP

Section 1. The membership of this Society shall be limited to Professional Engineers, registered under the laws of Virginia. Every member of this Society is a member of the National Society of Professional Engineers.

ARTICLE IV

DUES

Section 1. The dues of this Society shall be eight dollars ($8) per annum, due at the beginning of the fiscal year on January first. These dues shall be apportioned as follows: four dollars ($4) shall be retained by the State Society for its own activities, and four dollars ($4) shall be transmitted to the National Society to cover National Society dues and subscription to the AMERICAN ENGINEER.

ARTICLE V

CHAPTERS

Section 1. This Society, through its Executive Board, may authorize and charter chapters in suitable locations in the State. Only registered Professional Engineers shall be admitted to membership in any Chapter, and every member of a Chapter shall be a member of this Society and of the National Society of Professional Engineers.

Section 2. The Executive Board of the State Society shall have authority to make rules and regulations for chartering, combining, and/or dissolving chapters.

ARTICLE VI

CONDUCT OF CHAPTERS

Section 1. Each chapter chartered by the Society shall adopt such constitution and by-laws for its internal government as it may deem proper; provided, however, nothing therein shall conflict with or contravene the Constitution and By-Laws of the Society.

Section 2. Chapter Constitution, By-Laws, and Codes of Practice, or any amendments thereto, shall not become effective until approved by the Executive Board of the Society.

Section 3. Chapters shall engage in such activities as are consistent with professional ideals and ethics and are conducive to public welfare. Such activities shall be restricted to the section of the State for which the chapter is chartered, except as the Executive Board may authorize.

Section 4. Chapters shall collect, from their respective memberships, all dues and assessments payable to the State Society and the National Society; and, in addition, may fix and collect such chapter dues as they shall determine necessary for their chapter activities and administration, as provided in chapter constitution and/or by-laws.

Section 5. It shall be the duty of each chapter to transmit to State Headquarters or to the Society's duly designated officer the following: All State Society and National Society dues within fifteen days after their receipt; the names and addresses of newly elected, expelled, suspended, or deceased members, at once; and the notices of all meetings and elections.

Section 6. A Chapter intending to present a resolution for a vote at any meeting of the State Society, shall mail copies of such resolution to all other chapters and to State Headquarters, with a synopsis of the subject, at least three weeks prior to the meeting; or to the Resolutions Committee and to State Headquarters at least four weeks prior to the meeting.

Section 7. Authority to reprimand members, to suspend from membership temporarily, to expel from membership, shall be vested in the several chapters; provided, however, that in expulsion cases action shall be after approval by the Executive Board of the State Society. Chapters may conduct investigations, hearings, and trials, review of which shall be as provided in the By-Laws.

ARTICLE VII

OFFICERS DIRECTORS AND EXECUTIVE BOARD

Section 1. The officers of the State Society shall consist of a President, a First Vice-President, a Second Vice-President, a Secretary-Treasurer, and a Director.

Section 2. The officers together with the immediate Past President, shall form the Executive Board of the Society. The President, shall form the Executive Board of the Society. The President of the Society shall be Chairman of the Executive Board.

Section 3. The duties of the President shall be to preside at meetings, appoint committees and perform the other duties appropriate to his office.

The duties of the Vice-Presidents shall be to take the place of the President in his absence.

The duties of the Secretary-Treasurer shall be to carry on correspondence, keep records, collect dues, pay bills when approved by the President and to perform such other duties as are appropriate to his office.

The duty of the Director shall be to represent the Virginia Society on the Board of Directors of the National Society.

Section 4. Officers installed August 1, 1937, shall hold office until December 31, 1938, and after that all officers shall be elected for one year, and their term of office shall correspond with the calendar year.

ARTICLE VIII

COMMITTEES

Section 1. There shall be seven standing Committees; namely, Ethics and Practice, Legislative and Enforcement, Public Relations, Membership, Chapter Activities, Rules, and Resolutions.

Section 2. The Executive Board shall determine the number of which each standing committee shall be composed.

Section 3. The chairman and members of standing committees shall be appointed by the President for a period of one year or until discharged, and shall be designated within one month after the election of the President.

Section 4. A nominating Committee of five members shall be appointed by the President to prepare and send out the official ballot. No Officer or Director shall be eligible for membership on this Committee.

Section 5. An Audit Committee of three members shall, each year, be appointed by the President during the month of December.

Section 6. Special Committees shall be appointed by the President as required. He shall determine the size thereof and shall name the chairmen.

ARTICLE IX

Section 1. The Executive Board of the State Society shall have the authority to promulgate rules and conditions of good standing. Unless the Executive Board rules otherwise, a member shall not lose good standing, for non-payment of dues, until he is in arrears for more than two years.

ARTICLE X

CODES

Section 1. The Code of Ethics adopted by the Society upon recommendation of the Executive Board, and any amendments thereto, shall be binding on all chapters. Amendments to the Code of Ethics shall follow the same procedure as provided in Article XII for amendments to this Constitution.

Section 2. The several chapters shall adopt Codes of Practice suitable to the districts for which their charters have been granted.

ARTICLE XI

ELECTIONS

Section 1. All officers shall be elected annually and shall hold office for one year or

(Continued on page 24)

List of Accredited Undergraduate Curricula by the Engineering Council for Professional Development

(as of October 1, 1937, and Subject to Continued Revision)

UNIVERSITY OF ALABAMA
- Aeronautical Engineering
- Civil Engineering
- Electrical Engineering
- Industrial Engineering
- Mechanical Engineering
- Mining Engineering

UNIVERSITY OF ARIZONA
- Civil Engineering
- Electrical Engineering
- Mechanical Engineering
- Mining Engineering

UNIVERSITY OF ARKANSAS
- Civil Engineering
- Electrical Engineering
- Mechanical Engineering

ARMOUR INSTITUTE OF TECHNOLOGY
- Chemical Engineering
- Civil Engineering
- Electrical Engineering
- Mechanical Engineering

BROWN UNIVERSITY
- Civil Engineering
- Electrical Engineering
- Mechanical Engineering

BUCKNELL UNIVERSITY
- Civil Engineering
- Electrical Engineering

UNIVERSITY OF CALIFORNIA
- Civil Engineering
- Electrical Engineering
- Mechanical Engineering
- Metallurgical Engineering (Metallurgy)
- Mining Engineering
- Petroleum Engineering

CALIFORNIA INSTITUTE OF TECHNOLOGY
- Aeronautical Engineering (Six year course)
- Chemical Engineering (Five year course)
- Civil Engineering
- Electrical Engineering
- Mechanical Engineering

CARNEGIE INSTITUTE OF TECHNOLOGY
- Chemical Engineering
- Civil Engineering (a)
- Electrical Engineering (a)
- Industrial (Management) Engineering (a)
- Mechanical Engineering (a)
- Metallurgical Engineering (a)

CASE SCHOOL OF APPLIED SCIENCE
- Chemical Engineering
- Civil Engineering
- Electrical Engineering
- Mechanical Engineering
- Metallurgical Engineering

UNIVERSITY OF CINCINNATI
- Aeronautical Engineering
- Chemical Engineering
- Civil Engineering
- Electrical Engineering
- Mechanical Engineering

THE CITADEL
- Civil Engineering

CLARKSON COLLEGE OF TECHNOLOGY
- Civil Engineering
- Electrical Engineering
- Mechanical Engineering

CLEMSON AGRICULTURAL COLLEGE
- Civil Engineering
- Electrical Engineering
- Mechanical Engineering

COLLEGE OF THE CITY OF NEW YORK (a)
- Civil Engineering
- Electrical Engineering
- Mechanical Engineering

UNIVERSITY OF COLORADO
- Architectural Engineering
- Civil Engineering
- Electrical Engineering
- Mechanical Engineering

COLORADO SCHOOL OF MINES
- Geological Engineering
- Metallurgical Engineering
- Mining Engineering
- Petroleum Engineering

COLUMBIA UNIVERSITY (b)
- Chemical Engineering
- Civil Engineering
- Electrical Engineering
- Industrial Engineering
- Mechanical Engineering
- Metallurgical Engineering
- Mining Engineering

COOPER UNION INSTITUTE OF TECHNOLOGY (c)
- Civil Engineering
- Electrical Engineering
- Mechanical Engineering

CORNELL UNIVERSITY
- Chemical Engineering
- Civil Engineering
- Electrical Engineering
- Industrial (Administrative) Engineering
- Mechanical Engineering

DARTMOUTH COLLEGE
- Civil Engineering

UNIVERSITY OF DELAWARE
- Civil Engineering
- Electrical Engineering
- Mechanical Engineering

UNIVERSITY OF DETROIT
- Aeronautical Engineering
- Architectural Engineering
- Civil Engineering
- Electrical Engineering
- Mechanical Engineering

DREXEL INSTITUTE
- Chemical Engineering
- Civil Engineering
- Electrical Engineering
- Mechanical Engineering

DUKE UNIVERSITY
- Civil Engineering
- Electrical Engineering
- Mechanical Engineering

UNIVERSITY OF FLORIDA
- Civil Engineering
- Electrical Engineering
- Industrial Engineering
- Mechanical Engineering

GEORGIA SCHOOL OF TECHNOLOGY
- Aeronautical Engineering
- Civil Engineering (d)
- Electrical Engineering (d)
- Mechanical Engineering (d)

HARVARD UNIVERSITY (e)
- Civil Engineering
- Communication Engineering
- Electrical Engineering
- Industrial Engineering (Engineering and Business Administration)
- Mechanical Engineering
- Metallurgical Engineering (Physical Metallurgy)
- Sanitary Engineering

HOWARD UNIVERSITY
- Civil Engineering
- Electrical Engineering
- Mechanical Engineering

UNIVERSITY OF IDAHO
- Civil Engineering
- Electrical Engineering
- Mechanical Engineering

UNIVERSITY OF ILLINOIS
- Architectural Engineering
- Ceramic Engineering (Technical Option)
- Chemical Engineering
- Civil Engineering
- Electrical Engineering
- General Engineering (f)
- Mechanical Engineering
- Metallurgical Engineering
- Mining Engineering

IOWA STATE COLLEGE
- Agricultural Engineering (g)
- Architectural Engineering
- Chemical Engineering
- Civil Engineering
- Electrical Engineering
- General Engineering (f)
- Mechanical Engineering

STATE UNIVERSITY OF IOWA
- Chemical Engineering
- Civil Engineering
- Electrical Engineering
- Mechanical Engineering

JOHNS HOPKINS UNIVERSITY
- Civil Engineering
- Electrical Engineering
- Mechanical Engineering

UNIVERSITY OF KANSAS
- Architectural Engineering
- Civil Engineering
- Electrical Engineering
- Mechanical Engineering
- Mining Engineering

KANSAS STATE COLLEGE
- Agricultural Engineering (g)

EXPLANATORY NOTES

(a) Accrediting applies to both the day and evening curricula.
(b) Accrediting applies to the four-year and five-year curricula leading to the Bachelor of Science degree.
(c) Accrediting applies to day curriculum only. Action on evening curriculum deferred pending granting of degrees.
(d) Accrediting applies to both regular and cooperative curricula.
(e) Accrediting applies only to curriculum as submitted to E. C. P. D. and upon completion of which a certificate is issued by Harvard University certifying that the student has pursued such a curriculum.
(f) The accrediting of a curriculum in general engineering implies satisfactory training in engineering sciences and in the basic subjects pertaining to several fields of engineering; it does not imply the accrediting, as separate curricula, of those component portions of the curriculum such as civil, mechanical or electrical engineering that are usually offered as complete professional curricula leading to degrees in these particular fields.
(g) All curricula in agricultural engineering which appear in this list have been provisionally accredited for a period of two years. The reason for this is twofold; in the first place, it appears to E. C. P. D. that the final year of the four-year programs fails to build, in adequate manner, upon the engineering basis laid in the first three years; secondly, it is the feeling of E. C. P. D. that curricula in agricultural engineering might more properly be given as options under one of the major engineering branches (i. e., civil engineering, electrical engineering, or mechanical engineering).
(h) E. C. P. D. has not received from its sub-committee on Chemical Engineering a recommendation with respect to the evening curriculum in Chemical Engineering.

Architectural Engineering
Civil Engineering
Electrical Engineering
Mechanical Engineering

UNIVERSITY OF KENTUCKY
Civil Engineering
Metallurgical Engineering
Mining Engineering

LAFAYETTE COLLEGE
Civil Engineering
Electrical Engineering
Industrial (Administrative) Engineering
Mechanical Engineering
Metallurgical Engineering
Mining Engineering

LEHIGH UNIVERSITY
Chemical Engineering
Civil Engineering
Electrical Engineering
Industrial Engineering
Mechanical Engineering
Metallurgical Engineering
Mining Engineering

LOUISIANA STATE UNIVERSITY
Civil Engineering
Electrical Engineering
Mechanical Engineering
Petroleum Engineering

UNIVERSITY OF LOUISVILLE
Chemical Engineering
Civil Engineering
Electrical Engineering
Mechanical Engineering

UNIVERSITY OF MAINE
Civil Engineering
Electrical Engineering
General Engineering (f)
Mechanical Engineering

MARQUETTE UNIVERSITY
Civil Engineering
Electrical Engineering
Mechanical Engineering

UNIVERSITY OF MARYLAND
Civil Engineering
Electrical Engineering
Mechanical Engineering

MASSACHUSETTS INSTITUTE OF TECHNOLOGY
Aeronautical Engineering
Architectural Engineering
Building Engineering and Construction
Chemical Engineering
Civil Engineering
Electrical Engineering
Electrochemical Engineering
General Engineering (f)
Industrial Engineering (Business and Engineering Administration)
Mechanical Engineering
Metallurgical Engineering (Metallurgy)
Mining Engineering
Naval Architecture and Marine Engineering
Public Health Engineering
Sanitary Engineering

UNIVERSITY OF MICHIGAN
Aeronautical Engineering
Chemical Engineering
Civil Engineering
Electrical Engineering
Engineering Mechanics
Mechanical Engineering
Metallurgical Engineering
Naval Architecture and Marine Engineering
Transportation Engineering

MICHIGAN COLLEGE OF MINING AND TECHNOLOGY
Civil Engineering
Electrical Engineering
Mechanical Engineering
Metallurgical Engineering
Mining Engineering

MICHIGAN STATE COLLEGE
Civil Engineering
Electrical Engineering
Mechanical Engineering

UNIVERSITY OF MINNESOTA
Aeronautical Engineering
Chemical Engineering
Civil Engineering
Electrical Engineering
Mechanical Engineering
Metallurgical Engineering
Mining Engineering (Excluding Mining in Geology option)
Petroleum Engineering

UNIVERSITY OF MISSOURI
Civil Engineering
Electrical Engineering
Mechanical Engineering

MISSOURI SCHOOL OF MINES AND METALLURGY
Ceramic Engineering
Civil Engineering
Electrical Engineering
Metallurgical Engineering
Mining (Mine) Engineering (Excluding Mining Geology option)

MONTANA SCHOOL OF MINES
Geological Engineering
Metallurgical Engineering
Mining Engineering

MONTANA STATE COLLEGE
Civil Engineering
Electrical Engineering
Mechanical Engineering

UNIVERSITY OF NEBRASKA
Agricultural Engineering (g)
Architectural Engineering
Civil Engineering
Electrical Engineering
Mechanical Engineering

UNIVERSITY OF NEVADA
Electrical Engineering
Mining Engineering

UNIVERSITY OF NEW HAMPSHIRE
Civil Engineering
Electrical Engineering
Mechanical Engineering

UNIVERSITY OF NEW MEXICO
Civil Engineering
Electrical Engineering
Mechanical Engineering

NEW YORK UNIVERSITY
Aeronautical Engineering
Chemical Engineering (h)
Civil Engineering (a)
Electrical Engineering (a)
Mechanical Engineering (a)

NEW YORK STATE COLLEGE OF CERAMICS (At Alfred University)
Ceramic Engineering

NEWARK COLLEGE OF ENGINEERING
Civil Engineering
Electrical Engineering
Mechanical Engineering

NORTH CAROLINA STATE COLLEGE
Ceramic Engineering
Civil Engineering
Electrical Engineering
Mechanical Engineering

UNIVERSITY OF NORTH DAKOTA
Civil Engineering
Electrical Engineering
Mechanical Engineering
Mining Engineering

NORWICH UNIVERSITY
Civil Engineering
Electrical Engineering

OHIO STATE UNIVERSITY
Ceramic Engineering
Chemical Engineering
Civil Engineering
Electrical Engineering
Industrial Engineering
Mechanical Engineering
Metallurgical Engineering
Mining (mine) Engineering

UNIVERSITY OF OKLAHOMA
Architectural Engineering
Civil Engineering
Electrical Engineering
Mechanical Engineering
Petroleum Engineering (Production option)

OKLAHOMA A & M COLLEGE
Civil Engineering
Electrical Engineering
Industrial Engineering
Mechanical Engineering

OREGON STATE COLLEGE
Civil Engineering (Excluding Business option)
Electrical Engineering (Excluding Business option)
Mechanical Engineering (Excluding Business option)

UNIVERSITY OF PENNSYLVANIA
Chemical Engineering
Civil Engineering
Electrical Engineering
Mechanical Engineering

PENNSYLVANIA STATE COLLEGE
Architectural Engineering
Chemical Engineering
Civil Engineering
Electrical Engineering
Electrochemical Engineering
Industrial Engineering
Mechanical Engineering
Sanitary Engineering

UNIVERSITY OF PITTSBURGH
Chemical Engineering
Civil Engineering
Electrical Engineering
Industrial Engineering
Mechanical Engineering
Metallurgical Engineering
Mining Engineering
Petroleum Engineering
Petroleum Refining

POLYTECHNIC INSTITUTE OF BROOKLYN
Chemical Engineering (h)
Civil Engineering (a)
Electrical Engineering (a)
Mechanical Engineering (a)

PRINCETON UNIVERSITY
Chemical Engineering
Civil Engineering
Electrical Engineering
Mechanical Engineering

PURDUE UNIVERSITY
Chemical Engineering
Civil Engineering
Electrical Engineering
Mechanical Engineering

RENSSELAER POLYTECHNIC INSTITUTE
Chemical Engineering
Civil Engineering
Electrical Engineering
Mechanical Engineering

RHODE ISLAND STATE COLLEGE
Civil Engineering
Electrical Engineering
Mechanical Engineering

RICE INSTITUTE
Civil Engineering
Electrical Engineering
Mechanical Engineering

UNIVERSITY OF ROCHESTER
Mechanical Engineering

ROSE POLYTECHNIC INSTITUTE
Civil Engineering
Electrical Engineering
Mechanical Engineering

RUTGERS UNIVERSITY
Civil Engineering
Electrical Engineering
Mechanical Engineering
Sanitary Engineering

UNIVERSITY OF SANTA CLARA
Civil Engineering
Electrical Engineering
Mechanical Engineering

SOUTH DAKOTA STATE COLLEGE
Civil Engineering
Electrical Engineering
Mechanical Engineering

SOUTH DAKOTA STATE SCHOOL OF MINES
Civil Engineering
Electrical Engineering
Metallurgical Engineering
Mining Engineering

UNIVERSITY OF SOUTHERN CALIFORNIA
Petroleum Engineering

STANFORD UNIVERSITY
Civil Engineering
Electrical Engineering
Mechanical Engineering
Metallurgical Engineering
Mining Engineering
Petroleum Engineering

STEVENS INSTITUTE OF TECHNOLOGY (f)
General Engineering

SWARTHMORE COLLEGE
Civil Engineering
Electrical Engineering
Mechanical Engineering

SYRACUSE UNIVERSITY
Civil Engineering
Electrical Engineering
Industrial (Administrative) Engineering
Mechanical Engineering

UNIVERSITY OF TENNESSEE
Civil Engineering
Electrical Engineering
Mechanical Engineering

UNIVERSITY OF TEXAS
Civil Engineering
Electrical Engineering
Mechanical Engineering
Petroleum (Petroleum Production) Engineering

A & M COLLEGE OF TEXAS
Civil Engineering
Electrical Engineering
Mechanical Engineering
Petroleum Engineering

TEXAS TECHNOLOGICAL COLLEGE
Civil Engineering
Electrical Engineering
Mechanical Engineering

TUFTS COLLEGE
Civil Engineering
Electrical Engineering
Mechanical Engineering

TULANE UNIVERSITY OF LOUISIANA
Civil Engineering
Electrical Engineering
Mechanical Engineering

UNION COLLEGE
Civil Engineering
Electrical Engineering

UNIVERSITY OF UTAH
Civil Engineering
Electrical Engineering
Mechanical Engineering
Metallurgical Engineering
Mining Engineering

UNIVERSITY OF VERMONT
Civil Engineering
Electrical Engineering
Mechanical Engineering

UNIVERSITY OF VIRGINIA
Civil Engineering
Electrical Engineering
Mechanical Engineering

VIRGINIA MILITARY INSTITUTE
Civil Engineering
Electrical Engineering

VIRGINIA POLYTECHNIC INSTITUTE
Civil Engineering
Electrical Engineering
Industrial Engineering
Mechanical Engineering

WASHINGTON UNIVERSITY
Architectural Engineering
Civil Engineering
Electrical Engineering
Industrial (Administrative) Engineering
Mechanical Engineering

UNIVERSITY OF WASHINGTON
Aeronautical Engineering
Ceramic Engineering
Chemical Engineering
Civil Engineering
Electrical Engineering
Mechanical Engineering
Metallurgical Engineering
Mining Engineering

STATE COLLEGE OF WASHINGTON
Civil Engineering
Electrical Engineering (Basic and Hydro-electric options)
Mechanical Engineering (Basic option)
Metallurgical Engineering
Mining Engineering (Excluding Mine Administration and Petroleum Engineering option)

WEBB INSTITUTE OF NAVAL ARCHITECTURE
Naval Architecture and Marine Engineering

WEST VIRGINIA UNIVERSITY
Civil Engineering
Electrical Engineering
Mechanical Engineering
Mining Engineering

UNIVERSITY OF WISCONSIN
Chemical Engineering
Civil Engineering
Electrical Engineering
Mechanical Engineering
Metallurgical Engineering
Mining Engineering

WORCESTER POLYTECHNIC INSTITUTE
Civil Engineering
Electrical Engineering
Mechanical Engineering

YALE UNIVERSITY
Chemical Engineering
Civil Engineering
Electrical Engineering
Mechanical Engineering
Metallurgical Engineering

The Engineer in War

By **FRANK B. KING, Lieut. Colonel, 111th Engrs., A. E. F., Colonel Engrs., Inactive Reserve**

Engineers in the World War gave an excellent account of themselves. They took from the Marines the proud boast of being the first to fight and suffered losses about equal to the artillery.

It can hardly be expected that the next war will find us with allies able to carry on for a year while we get ready and there can be no desire to repeat the experience of the British at Mons or of the French at the first battle of the Marne.

The motorization and mechanization of the army will require the services of more engineers than ever before since it can be safely predicted that all battles will not be fought near paved roads and filling stations.

Engineers with war experience are fast reaching an age where they will be unfitted for service in the theater of operations. For duty in the home sector and service of supply, engineers can quickly change from their civilian work to efficient service with the army, after some hard study of Army Regulations and Military Law. For service at the front a different kind of training and viewpoint is necessary.

Military engineering is, in its self, well worth a study by all engineers since it is supposed to be the concentrated essence of efficiency. A means to secure maximum results with minimum resources. It is the proof of the saying that anything which succeeds is right and anything which fails is wrong. Other arms of the service are want to quib the engineers with a saying that any enterprising officer of infantry, cavalry or artillery can bridge a stream and get his troops across while the engineer is making his plans and figuring his stresses. In civil engineering we assume that we have plenty of time for planning and that everything necessary in the way of material and equipment will be available. In military engineering one must take what he can find and time is always a vital element.

One definition of military field engineering is "The utilization of the materials at hand for the comfort, health and security of an army in the field." Since comfort, health and security are about the last things considered in war time it would seem that a better definition would be "the utilization of the men, equipment and materials at hand to best serve the military objective.

Engineer troops are trained and, with some exceptions, armed as infantry. Quite often they are called upon to take a place in the fighting line. For this reason infantry training is necessary. Purposes and limitations of the other arms must be known in order to render effective co-operation.

While the number receiving training in the national guard and officers reserve corps is rather impressive at the present time, many of these will be unavailable for various reasons in case of a major conflict. The war will take a toll and replacements will be called for. To fill this demand the country will in the future, as in the past, have to depend upon the greater number who have had little or no training.

Save for water transportation, standard gauge railroads offer the most efficient means for moving men, equipment and materials. The range of modern guns and the liability of attack from the air will require the location of railheads farther to the rear than formerly, leaving advance supply to the use of trucks and wagons.

The airplane has taken the romance out of war. "The watch-fires" no longer exist. Day travel or a light at night is almost sure to attract shells or bombs. For this reason supply trains in the forward area must move at night without lights. This will slow down any kind of transport and for distribution to outfits off the road it is difficult to understand how the faithful army mule can be dispensed with, either under packs or in harness.

If one could know in advance the kind of work he would be called upon to do more profit could be had from advance training. Road and bridge work is sure to be the chief concern of the engineers. Much can be learned in peace time but no advance training can simulate the night marches in unknown territory, the incredible amount of transport necessary for supply and the evacuation of the sick and wounded or the inconceivable amount of damage trucks can do to any type of road to be found in the theater of operations. Enemy shells and

(Continued on page 24)

CONVENTIONS

PROGRAM
OKLAHOMA SOCIETY
of
PROFESSIONAL
ENGINEERS
THIRD ANNUAL
CONVENTION

JANUARY 21-22, 1938
Mayo Hotel
Tulsa, Oklahoma

ALL MEETINGS AT MAYO HOTEL

FRIDAY, JANUARY 21, 1938, MORNING

9:00 A. M. REGISTRATION
9:00 A. M. BOARD OF DIRECTORS

FRIDAY, JANUARY 21, 1938, AFTERNOON

2:00 P. M. JOINT MEETING WITH A. S. C. E.
Address of Welcome
Mayor T. A. Penny, Tulsa, Okla.
Response
T. P. Clonts, Muskogee, Okla.
A. *"Aspects of Proration—A Conservation Measure"*
Mr. W. J. Armstrong, Chief Conservation Engineer, Oklahoma State Conservation Comm.
B. *"Water Repressuring and Salt Water Disposal"*
Mr. Paul Reed, Associate Editor, *Oil and Gas Journal*
C. *"Geophysical Research by Seismograph Survey"*
Mr. W. T. Born, Geophysical Research Corp.

FRIDAY, JANUARY 21, 1938, EVENING

7:00 P. M. DEPARTMENT OF PUBLIC SAFETY
Engr. H. E. Bailey, Assistant Commissioner.
Mr. Tracy Daugherty, Traffic Technician
Mr. Willis D. Smith, Patrolman
7:30 P. M. CONSTRUCTION OF GOLDEN GATE BRIDGE
Sound Picture
American Institute of Steel Const., Inc.
9:00 P. M. "CITY OF TOMORROW"
Prepared by Dr. Miller McClintock, Director, Bureau for State Traffic Research,
Harvard University,
and
Norman Bel-Geddes,
Noted Designer

SATURDAY, JANUARY 22, 1938, MORNING

9:00 A. M. REGISTRATION
9:00 A. M. GENERAL SESSION
Members only
12:00 NOON LUNCHEON WITH ENGINEERS' CLUB OF TULSA
12:45 P. M. "NAVY ON CHINA STATION"
Mr. James D. Durkee, Phillips Petroleum Company

SATURDAY, JANUARY 22, 1938, AFTERNOON

1:30 P. M. "GRAND RIVER DAM PROJECT"
Engr. W. R. Holway
2:00 P. M. ENTERTAINMENT FOR THE WIVES OF ENGINEERS
Mrs. Geo. F. Isley, Chairman
3:00 P. M. BOARD OF DIRECTORS

SATURDAY, JANUARY 22, 1938, EVENING

7:00 P. M. ASSEMBLY
7:15 P. M. BANQUET

TOASTMASTER
Mr. R. K. Lane
8:15 P. M. ADDRESS
"THE GOVERNMENT AND THE TREND OF BUSINESS"
Dr. Arthur B. Adams, Dean of the College of Business Administration, University of Oklahoma
9:45 P. M. DANCING
Music By
LINDY'S ORCHESTRA

BOARD OF DIRECTORS

Term Expiring January, 1938
BANKS, T. G.
GRACE, WM. ROY
MAPES, CLAREL B.
SAXTON, REN G.
TOLER, GEO. G.

Term Expiring January, 1939
BUSH, LEE M.
CLARK, J. ST. CLAIR
SALE, W. CLAUDE
SHIBLEY, M. C.
TAPPAN, S. G.

Term Expiring January, 1940
BAKER, E. C.
CLARK, B. E.
COCHRANE, VIC. H.
GUERNSEY, C. H.
WHITE, HOMER X.

Term Expiring January, 1941
DANNER, R. F.
LONG, V. V.
RIGHTMIRE, C. H.
WATSON, CHAS. D.
WOLF, WM. R.

Term Expiring January, 1942
DARCEY, HENRY J.
FELGAR, J. H.
LASHBROOK, C. A.
LANGFORD, C. T.
MCCONNELL, GLENVER

Term Expiring January, 1943
HOLWAY, W. R.
PHILLIPS, R. L.
SAXTON, REN G.
STEIN, GEO. J.
STOBAUGH, JOHN J., JR.

OFFICERS OF THE BOARD OF DIRECTORS, 1937

President
SALE, W. CLAUDE
First Vice-President
GUERNSEY, C. H.
Second Vice-President
TOLER, GEO. G.
Secretary
LASHBROOK, C. A.
Treasurer
BAKER, E. C.
National Director
MAPES, CLAREL B.

PROGRAM
of the
FIFTY-THIRD ANNUAL MEETING
ILLINOIS SOCIETY OF ENGINEERS
PEORIA, ILLINOIS

January 27, 28, 29, 1938
Headquarters, Jefferson Hotel

THURSDAY, JANUARY 27

9:00 a. m. Registration opens.

SURVEYING SECTION

J. E. Weinel, Chairman, Presiding
10:00 a. m. Legislative Experience with Land Surveyors License Law. Honorable A. M. Kaindl, Member I. S. E., State Representative, 23d District.
10:35 a. m. An Annual Conference of Land Surveyors. Professor W. H. Rayner, Member I. S. E., University of Illinois.
11:10 a. m. The Hayden-Ickes Bill. Professor J. C. Penn, Member I. S. E., Professor of Civil Engineering, Armour Institute of Technology.
11:55 a m. Election of Section Officers.
12:00 noon Luncheon and Round Table discussion of preceding papers.

DRAINAGE SECTION

J. R. Gardner, Chairman, Presiding
1:30 p. m. The Flood of January, 1937, in the Ohio and Lower Mississippi River Basins. Walter M. Smith, D.Sc., Member I. S. E., Chief Engineer, Division of Waterways, Springfield, Ill.
1:55 p. m. Drainage under Flat Country and Shallow Creek Conditions. C. F. Halt, W. P. A. Area Supervisor, Kankakee County, Ill.
2:20 p. m. Drainage. A. L. Webster. Member I. S. E., Drainage Engineer, Wheaton, Ill. Presented by C. Pemberton, Member I. S. E., Superintendent CCC Drainage Camp D-1, Tuscola, Ill.
2:45 p. m. Work of the CCC Drainage Camps. John G. Sutton, District Engineer, Milwaukee, Wis.
3:10 p. m. Diesel Engines in Drainage Service. C. J. Schroeder, Manager Diesel Dept. Fairbanks, Morse & Co., St. Louis, Mo.
3:55 p. m. Election of Section Officers.

ELECTRICAL, MECHANICAL AND MINING SECTION

M. M. Leighton, Chairman, Presiding
4:00 p. m. Why Railroad Rails Break and What is Being Done About It. H. F. Moore, Member I. S. E., Research Professor of Engineering Materials, University of Illinois.
4:25 p. m. Improvements in the Designs and Application of Street Lighting Equipment and Its Application for Traffic Safety. Chas H. Rex, General Electric Co., Chicago.
4:50 p. m. New Oil and Gas Activities in Illinois. A. H. Bell, Geologist and Head of Oil and Gas Division, Illinois State Geological Survey.
5:15 p. m. Election of Section Officers.

JOINT DINNER WITH LOCAL CHAPTER, AMERICAN SOCIETY OF MECHANICAL ENGINEERS

FIFTY-THIRD ANNUAL BUSINESS SESSION

President W. D. Jones, Presiding

8:30 p. m. Adoption of Society policies; public affairs; committee reports; election of officers; selection of next meeting place; annual award; etc.

FRIDAY, JANUARY 28

WATER SUPPLY SECTION

D. H. Maxwell, Chairman, Presiding

9:00 a. m. Design of Small Softening and Iron Removal Plants. J. J. Woltman, Member I. S. E., Consulting Engineer, Bloomington.

9:25 a. m. Reconstruction of the Cairo Water Purification Plant. C. M. Ross, Member I. S. E., Manager, Cairo Water Company, Cairo, Ill.

9:50 a. m. Some Points on Water Works Design from the Operator's Viewpoint. W. M. Olson, Member I. S. E., Operator, Winnetka, Ill., Water Purification Plant.

10:15 a. m. What is New in Water Purification. H. E. Babbitt, Member I. S. E., Professor of Sanitary Engineering, University of Illinois.

10:25 a. m. Election of Section Officers.

SEWERAGE SECTION

J. A. Harman, Chairman, Presiding

10:30 a. m. Experimental Work in Progress at the Sanitary District of Chicago Plants. H. L. Herrick, Assistant Civil Engineer, Maintenance and Operation Department, Sanitary District of Chicago.

10:50 a. m. Danville, Illinois, Sewage Treatment Works. Paul Hansen, Member I. S. E., Greely and Hansen, Consulting Engineers, Chicago.

11:10 a. m. Complete Recovery of Distillery Wastes. C. S. Boruff, Chief Chemist, Hiram Walker Distillery, Peoria.

11:30 a. m. Gas Power Plant. J. R. Longley, Member I. S. E., Engineer in Charge, Peoria Sewage Treatment Works.

11:50 a m. Operation of Calumet Treatment Works—Activated Sludge and Sludge Incineration. R. W. Peterson, Assistant Civil Engineer, Maintenance and Operation Division, Chicago Sanitary District.

12:10 p m. Engineering Experience Sanitation in Illinois During the 1937 Ohio River Flood. C. W. Klassen, Member I. S. E., Chief Sanitary Engineer, State Department of Health, Springfield, Ill.

12:25 p. m. Election of Section Officers.

12:30 p. m. Luncheon and Round Table discussion of preceding papers.

PROFESSIONAL ACTIVITIES SECTION

C. E. DeLeuw, Chairman, Presiding

2:00 p. m. The Professional Engineers Registration Law. Hon. A. M. Kaindl, Member I. S. E., State Representative, 23d District.

2:25 p. m. The Material Retirement of the Young Engineer. T. B. Johnson, President, Illinois Assembly, American Association of Engineers.

2:55 p. m. Problems of the Illinois Engineering Council. J. A. Harman, Honorary Member I. S. E., Consulting Engineer, Peoria, Ill.

3:15 p. m. Professional Ethics. A discussion led by Edwin Hancock, Member I. S. E., Chicago; L. M. Kinsey, Consulting Engineer, Pekin, Ill.; and G. C. Cameron, Municipal Engineering Co., Oak Park, Ill.

3:40 p. m. Election of Section Officers.

PROFESSIONAL RELATIONS SECTION

L. D. Gayton, Chairman, Presiding

3:45 p. m. The Professional Engineer and the Operating Engineer; Their Mutual Interests. J. G. Bennema, Treasurer, Local 143, Union of Steam and Operating Engineers; International Secretary, Legislative Committee, Illinois State Federation of Labor.

4:15 p. m. Engineering Publicity. H. C. Broadman, Member I. S. E., Superintendent of Maps and Plats, City of Chicago.

5:15 p. m. Election of Section Officers.

FIFTY-THIRD ANNUAL BANQUET AND ENTERTAINMENT

(Informal)

W. D. Jones, President, Presiding

6:30 p. m. Guest Speaker, L. B. Neumiller, Vice-President, Caterpillar Traction Co., Peoria.

Entertainment.

SATURDAY, JANUARY 29

STRUCTURAL SECTION

W. M. Wilson, Chairman, Presiding

9:00 a. m. Rigid Frames. Professor T. C. Shedd, Member I. S. E., Professor of Structural Engineering, University of Illinois.

9:45 a. m. Some Developments in Timber Construction. W. D. Kenney, Engineer, Service Bureau, American Wood Preservers Association.

10:55 a. m. Election of Section Officers.

ROADS AND PAVEMENTS SECTION

Paul Corcoran, Chairman, Presiding

11:00 a. m. Safe and Sane Highways. C. C. Wiley, Member I. S. E., Professor of Highway Engineering, University of Illinois.

11:20 a. m. Building Safety Into County Roads. N. L. Woods, Assistant County Highway Superintendent, Peoria County.

11:45 a. m. Development of Soil Studies by the Illinois Division of Highways. W. B. Worsham, Member I. S. E., Assistant Engineer of Materials, Illinois Division of Highways.

12:05 p. m. Revival of Special Assessments Paving in Illinois. E. C. Wenger, Member I. S. E., Regional Highway Engineer, Portland Cement Association.

12:30 p. m. Making the Motor Fuel Tax Dollar Go Further in Illinois Cities. Rob Roy, Member I. S. E., Civil Engineer, Aurora.

12:55 p. m. Election of Section Officers.

1:00 p. m. Luncheon and Round Table discussion of preceding papers.

INSPECTION TRIPS

2:30 p. m. Inspection trip to Hiram Walker Distillery.

Inspection trips to other points of interest in and about Peoria will be arranged by the Local Committee to take place during the technical sessions.

KENTUCKY SOCIETY OF PROFESSIONAL ENGINEERS ANNUAL MEETING

January 28-29, 1938

LAFAYETTE HOTEL

LEXINGTON, KENTUCKY

FRIDAY, JANUARY 28, 1938

10:30 a. m.

Registration—Mezzanine Floor.

11:00 a. m.

Meeting, Board of Direction.

1:30 p. m.

Meeting in Ball Room—Mezzanine Floor.

George H. Sager, Jr., President of the Society, Presiding Officer.

Address of Welcome

HON. REED WILSON, Mayor of the City of Lexington

Address. Represurring Oil Wells.

H. COMER WOLF, Irvine, Ky.

Address. Municipal Engineering Problems.

M. J. McGRUDER, City Engineer of Lexington.

Address. Highway Engineering.

D. H. BRAY, Kentucky State Highway Maintenance Engineer.

Address. Work Accomplished by the Works Progress Administration in Kentucky.

E. A. MAYRE, State W. P. A. Engineer.

Address. The Design and Construction of the Kentucky River Memorial Bridge at Frankfort.

E. D. SMITH, Asst. Bridge Engineer, State Highway Department.

Discussion of papers.

Appointment of Special Committees.

Adjournment.

6:45 p. m.

Dinner Meeting in Ball Room.

Toast Master, Major Thomas H. Cutler.

State Highway Engineer.

Address. The World War Debt.

COLONEL JAMES HIRAM GRAHAM, Dean, College of Engineering, University of Kentucky.

Address. The Kentucky Safety Commission.

W. H. HANSEN, State Supervisor of Safety.

Address. Registration Laws.

GEORGE H. SAGER, JR., President Kentucky Society of Professional Engineers.

Discussion of Papers.

Adjournment.

SATURDAY, JANUARY 29, 1938

9:30 a. m.

Business Meeting in Ball Room—Mezzanine Floor.

Reading of Minutes.

President's Report.

Treasurer's Report.

Reports of Standing Committees.

Finance: J. S. Watkins, Chairman.

Legislative: B. M. Brigman, Chairman.

Membership: C. S. Crouse, Chairman.

Press and Publicity: W. B. Wendt, Chairman

Program: D. V. Terrell, Chairman.

Unfinished Business.

Reports of Special Committees.

Election of Officers.

Induction of Officers.

New Business.

Adjournment.

OFFICERS OF THE SOCIETY FOR 1937

President
GEORGE H. SAGER, JR., Louisville
First Vice-President
D. V. TERRELL, Lexington
Second Vice President
PAUL M. JONES, Madisonville
Secretary-Treasurer
C. S. CROUSE, Lexington

BOARD OF DIRECTION

O. S. BATTEN, Pikeville 1937-1938
WM. A. V. BORRIES, Dawson Springs 1937-1938
B. M. BRIGMAN, Louisville 1937-1938
WOOLSEY M. CAYE, Louisville ..1937-1938
C. S. CROUSE, Lexington 1937
PAUL M. JONES, Madisonville 1937
J. H. ROMANN, Louisville 1936-1937
GEORGE H. SAGER, JR., Louisville ..1936-1937
H. L. SHEARER, Lexington 1936-1937
D. V. TERRELL, Lexington 1937
J. S. WATKINS, Lexington 1936-1937
W. B. WENDT, Louisville 1937

OHIO SOCIETY OF PROFESSIONAL ENGINEERS

JOHN LAYLIN, Exec. Secy.

President	*Vice-President*
J. R. LURKEY	HARRY C. MILLER
Treasurer	*Vice-President*
E. G. CANTWELL	VICTOR C. SMITH

ANNUAL CONVENTION OHIO SOCIETY OF PROFESSIONAL ENGINEERS AT THE NEIL HOUSE, COLUMBUS, OHIO FEBRUARY 9, 10 AND 11, 1938

PROGRAM

OPENING SESSION—1:30 P. M. FEB. 9

Welcoming Address by Honorable Myron B. Gessaman, Mayor of Columbia.

Address by Honorable John Jaster, Jr., Director of Highways, State of Ohio.

Address by Professor H. E. Nold of Ohio State University on the all-important subject of "ENGINEERING EDUCATION AND THE PROFESSIONAL ENGINEER."

Sidney Williams, Chairman of the Traffic Division of the National Safety Council, Chicago, will address us on the timely subject of "TRAFFIC SAFETY."

Colonel D. A. Davison, District Engineer of the Louisville District, Corps of Engineers, U. S. Army, will give us an interesting address on "STREAM REGIMENTATION."

THURSDAY, FEBRUARY 10

Group Meetings during the day, culminating in the annual banquet at 7 o'clock in the evening.

Group Meetings:

CHEMICAL ENGINEERS—Dr. James R. Withrow, presiding. Speakers of national repute participating.

COUNTY ENGINEERS—President B. G. Kesting, presiding.

ELECTRICAL AND MECHANICAL ENGINEERS—George Warren Emery, presiding.

ENGINEERING EDUCATION—Professor H. E. Nold, presiding. This session, in itself, bespeaks the fine co-operation being developed between educational institutions and Ohio Society of Professional Engineers.

MUNICIPAL ENGINEERS—Mr. W. F. Peters, presiding.

Open Forum

5 West 75th St.
New York City.
January 22, 1938.

Dr. D. B. S.einman
117 Liberty Street
New York City.

Dear Sir:

Having read, with much interest, your article "Earnings of Engineers" in the AMERICAN ENGINEER, have had an urge for some time, to add my bit to the applause. Of course the salary table presented by the E. C. P. D. is a ridiculous exaggeration, and I wish very much that you would instigate some sort of mass protest from the profession, to be directly submitted to the perpetrators of what you rightly designate "a crime." A petition or something on that order.

Comparing the tables, the disparity is glaring enough, but even the U. S. L. B. statistics overstate the case. They may be fairly representative of yearly rates, but in the lower scale, I judge they ignore the casual day labor basis, with frequent layoffs and loss of income, to which the preponderant percentage of engineers are subject.

Regarding the definition of "Engineer." Recognizing that there are executive responsibilities in all engineering jobs that require superior technical, and broader general knowledge, and merit commensurate compensation, nevertheless, to my way of thinking, "Engineering" is nothing more typically, than "Making working drawings on a drafting board," and in my opinion it is this definition and picture of "Engineer" that must be propagated and elevated to its due dignity and importance. Certainly, the drafting board is the very symbol of the profession, and to the extent that it is degraded, all ranks suffer, and whether they realize it or not, employers suffer too. Some employers may feel they can smugly ignore moral issues, but those who do, cheat themselves. However, I really don't think there are actually many of this kind, and believe the majority would approve of greater legal restriction on every phase of engineering practise as the solution.

The second paragraph of your article is a fine summary of the typical plight. While I hardly believe there is an organized conspiracy among large employers, to keep engineers in subjection, nevertheless, the prevailing system works that way. Standard salary rates, in which, in various too broad divisions, there is no recognition of comparative experience and qualifications. In some cases, seniority rights are given a ridiculous precedence over merit. The minute a slump hits the drafting room, the attrition begins. That condition is largely beyond the employer's control, but the men are laid off, and while some employers do give them a small bonus, there, too frequently, their concern ends. It is seldom that the employe is given any written endorsement of his qualifications, that would be helpful in getting another job. He has to go through the tedious, and much worse, the *embarrassing* ordeal of filling out application forms, and being blindly at the mercy of the whims and other human vagaries of former employers for his endorsements. I hope the time will come when professional engineering societies will have registration bureaus, and a thorough system of recording the professional ratings of their members, so that at least, until the Utopia of stabilized employment arrives, the victims of economic fluctuations will have a source of interested and unbiased reference.

Right now I think all professional societies could make effective appeals to employers on that point. A released employe should be given a written qualification rating, and also, the right to argue its fairness if he thinks it insufficient. Also, if he wishes, some blue prints of his designs to present to new prospective employers. I think something very useful could be done right now, by joint co-operation of professional societies and employers, and New York State would be a very good place to begin.

Needless to say, I am strongly opposed to unionization of engineers, but existing conditions are all too conducive to that trend. If matters don't improve, there won't be a sufficient number of my opinion to prevail. If large employers wish to forestall larger headaches in the future, they should get together now. I should think, of all industries, the construction industry is most susceptible to planning to stabilize employment.

Yours very truly,
J. F. P. TATE,
5 West 75th St.,
New York City.

January 20, 1938.

G. Ross Henninger, Editor
Electrical Engineering
American Institute of Electrical Engineers,
33 West 39th Street
New York City

Dear Engineer Henninger:

In all of my eighteen years of affiliation with A. I. E. E. I have never witnessed such an unwarranted and unprofessional attack on members of our profession as appears in a letter addressed to the editor by Louis S. Leavitt, Assistant to the Vice-President and General Manager, Worcester Electric Light Company of Worcester, Massachusetts, published in the January 1938 issue of Electrical Engineering.

His charge that the Engineering Examining Boards are composed of politicians and that the whole thing may degenerate to a political racket "is not" substantiated by the facts, which are available to anyone; even to those whose sincerity of purpose is questionable, when tainted with such violent abuse of their fellow practitioners.

The lowly ethics to which he refers are well exemplified by his remarks.

I have yet to witness in the legal or medical profession such an unethical attack unchallenged.

The members of these examining boards are members of our profession serving with little or no compensation at great personal sacrifice without fear or favor and need no defense other than their unimpeachable records.

Sincerely yours,
(Signed) WILLARD S. CONLON,
(A'20, M'26) A.I.E.E.
(A.M.'31, M'33) A.S.C.E
Executive Secretary
National Society of
Professional Engineers

CURRENT EDITORIALS

TEXAS' EMPIRE-BUILDING ENGINEERS

From the San Antonio Texas Express

The engineering profession, that has done so much for Texas in the past, will find here a field of labor rich in opportunity and scarcely to be matched anywhere else in the world. Moreover, the engineer is better appreciated in Texas than in many other parts of the country.

In an address to San Antonio chapter, Texas Society of Professional Engineers, Harry E. Harris of Bridgeport (Connecticut) paid this State and its citizens that gratifying compliment. The visitor—a former president of that organization and a high-ranking engineer in his own State—was particularly impressed with such engineering achievements as the Lower Rio Grande Valley's irrigation system and the air fields around San Antonio. He predicted that—thanks to the constructive development now under way in this region—South and West Texas will become a stronghold for the professional engineer.

Again, while in other parts that modern "empire-builder" generally is taken for granted, hereabouts he is valued at something like his real worth.

A probable explanation is that an "engineering spirit" is abroad. The "wholesale manner of getting things done" fits well into the Texas scheme. That approach to public, and to many business and industrial, problems is traditional to the Texans.

For the engineer's handiwork—like Sir Christopher Wren's monument—the discerning visitor need but look about him. Through more than a century past, the engineer has been building Texas—but he has wrought his greater achievements within this generation's memory. Formerly his efforts were devoted mainly to surveying ranches and farms, laying out cities, damming rivers, building railroads and highways, creating and transmitting electrical energy, keeping rivers within bounds, supplying cities with water, digging canals, rearing skyscrapers, and an almost endless variety of other constructive enterprises. For those undertakings Texas has afforded him an inviting and, altogether, fruitful field.

Lately, however, the engineer has developed various new interests. He is largely concerned with industrial, social, cultural and civic planning. Consider the engineers serving The Texas Planning Board and its many auxiliary committees. Those groups, in their respective fields—public health, traffic safety, soil-conservation, land-use, water resources, forestry, mineral resources, transportation, industrial, educational, government, social, mapping and so n—are laying foundations for the Greater Texas which the engineers of tomorrow will build.

For, the engineer is both planner and builder. He is the man of vision, but seldom the visionary—for he keeps his feet planted on solid ground. Therefore, Texas is grateful to its engineers and happy to welcome new engineering enterprises—which unfailingly spell progress.

WISDOM FROM AN EDUCATOR

From the New York Herald Tribune

As most of us are already well aware, President Conant, of Harvard, never discusses educational policy without kindling in his audience, public and academic, a renewed respect for the depth of his understanding and the breadth of his sympathies. Thus in his latest report to his board of overseers he canvasses the problems facing Harvard, and, for that matter, all institutions of higher learning, as they affect both society and the individual student and plots a course of action as simple as it seems intelligent.

It will, of course, create controversy, especially that item on his program which calls for further limitation of enrollment. Americans are used to the notion that every child is entitled to a college education and offhand may resent the suggestion that universities put up their bars. But, as Dr. Conant points out, not only is there "an optimum size for every academic institution" but "it seems evident that we are in danger of reaching the condition already so acute on the continent of Europe where the problem of unemployment in the learned professions demands attention even in countries wracked by political and economic troubles." In other words, why encourage a conglomerate lot of candidates to fight for a living at the top of the occupational structure when what society needs is not more but better qualified doctors, lawyers, teachers, engineers, etc.? Dr. Conant notes that "there appears to be no serious overcrowding in the medical profession," also that "this is exactly the profession in which there has been for some time a strict limitation on the size of the student body in the leading schools." So he has instituted a selective process of similar severity for the Harvard Law School. "Beginning with the class admitted this fall, only those candidates will be enrolled who appear to the committee in charge to have at least an even chance of passing the examinations at the end of the first year."

But he has no thought of class distinction in his selectivity. Lest a policy of enrollment limitation work against the poor boy of special ability and aptitude, he urges an extension of the scholarship principle and specifically of the national scholarships which Harvard established in commemoration of its tercentenary. He would make these available for boys entering from all parts of the country, instead of from only fifteen Western and Southern states as at present, and have more of them for graduate students from other colleges. Of hardly less concern to him is over-specialization with its tendency to segregation and narrowness. As an offset he would not return to the old concept of a liberal education which means "subjecting every one to the same set of disciplines and compelling every one to acquire the same basic knowledge in school and college." He believes in the adaption of the curriculum to the intellectual bent of the individual.

SYMPATHY TO OUR CANADIAN NEIGHBORS

The Engineering Profession in British Columbia Feels Great Loss

It is with deep regret that we inform you that the death of our Registrar and Secretary-Treasurer, M. E. A. Wheatley, took place at the Shaughnessy Military Hospital on February 2nd after a serious illness of five weeks.

The following Resolution was passed at a special Council Meeting held at 1:30 p. m. today, which we consider expresses the feelings of the entire membership:

> "This Council receives with the deepest regret the sad news of the death, on February 2nd, of the Registrar and Secretary-Treasurer of the Association, Mr. E. A. Wheatley, and it desires to record its sense of the great loss which Mr. Wheatley's death is to the Council and to the entire Engineering Profession in British Columbia.
>
> By able and devoted service to the Engineering Profession over a period of many years, Mr. Wheatley earned the gratitude and admiration not only of the membership of this Association but of a large body of Engineers beyond the boundaries of the Province, and for such invaluable service this Council wishes to record its sincere and grateful appreciation."

P. L. LYFORD,
Vice-President.

Editor's Note:

The National Society of Professional Engineers in the United States extends its sympathetic hand and heart to the Engineering Profession in British Columbia over the loss of Engineer E. A. Wheatley. We in the States, looked upon him as the head of the Professional Engineer registration and organization movement in British Columbia.

NEWS OF STATE SOCIETIES

EDITOR'S NOTE: If your State Society is not represented in this month's news, contact your State Secretary and ask him to send monthly information to the editor. Please put THE AMERICAN ENGINEER, *222* North Third Street, Harrisburg, Pennsylvania, on your mailing list for all chapter and State Society Bulletins.

DISTRICT OF COLUMBIA

The District of Columbia Society of Professional Engineers announcing the following officers for 1938:

VIRGIL C. WAGNER, *President,* 3005 N. 2nd Rd., Arlington, Va.
JOSEPH BARNETT, *Vice-President,* 4550 Connecticut Ave., N. W.
WILLIAM L. BACH, 1421 Massachusetts Ave., N. W.
M. C. STEUBER, *Treasurer,* 1954 Columbia Road, N. W.
LEO H. CLEARY, *Director, 2726* Connecticut Ave., N. W.
MILTON KELLERT, *Director,* 3435 Brown St., N. W.
COL. WALTER L. SIMPSON, *Director,* Smith-Powhattan Hotel.
RICHARD A. JOBES, *Director,* 1812 K. St., N. W.
MAURICE C. KICZALES, *Director,* 3000 Connecticut Ave., N. W.
JOHN W. DUNHAM, *Supervisor,* 803 Quintana Place, N. W.
W. I. SWANTON, *Supervisor,* 1464 Belmont St., N. W.
WINFRED MORRIL, *Supervisor, 232* Gallatin St., N. W.

On January 18, 1938 the District of Columbia Society of Professional Engineers held its annual meeting for the election of officers in the Meridian Room of 2400 16th Street, N. W., Washington, D. C.

A dinner was attended by twenty-two members of the Society and two guests, L. C. Leslie and Mr. Horn, of the Johns-Manville Company. Following this, a sound picture. "Heat and Its Control," was shown before the members and their guests. This film, prepared under the direction of the Johns-Manville Company and shown by Mr. L. C. Leslie and Mr. Horn, depicts the story of heat from the time of the Sun Worshippers in progressive, clear, concise steps up to and including the present. It portrays James Watt developing the steam engine, his contemporaries and their theories. It clearly explains conduction, radiation and convection by means of simple, easily understood experiments, and finally it traces the materials of insulation from their beginnings through the various processes and patient, exacting laboratory tests to the installation itself.

The meeting was opened with the election of officers for the year 1938. The retiring President, Colonel W. L. Simpson, for his loyal and untiring efforts in the Society's behalf, was given a hearty vote of gratitude, after which the new President, Engr. V. C. Wagner, took office.

The National Secretary, Engineer Willard S. Conlon, spoke enthusiastically on the subject of the License Law for Engineers in the District of Columbia, which bill will be presented to the Congress of the United States. Engr. Conlon reviewed the many difficulties encountered in other states, notably Connecticut, and how these were overcome by persistence and unflagging energy. He spoke of our part in the Engineering Council of the District and Engr. Barnett's part as our delegate to this Council in the drafting of a License Law.

A debate, concerning the relative merits of independent action on our part as against the wisdom of co-operating with the Engineering Council in the drafting of a Licensing Law, arose when Engr. Barnett answered the points brought out by Engr. Conlon. Rebuttal by Engr. Conlon closed the discussion and the meeting.

CONNECTICUT

At the meeting of the Connecticut Society of Professional Engineers' Board of Directors held in January, a proposal was submitted by Engineer W. J. Mahan that an excursion trip be planned to the New York World's Fair. This trip, for the entire Connecticut Group, is planned for September or October of this year in advance of the Fair's opening. This trip will include an organized inspection tour through the grounds to cover engineering phases of the entire works.

It was voted that Engineer President Allen Hubbard appoint a committee of five to submit a schedule for a proposed itinerary of the entire trip for approval at the next Board of Directors meeting.

NEW YORK

NEW YORK STATE SOCIETY OF PROFESSIONAL ENGINEERS, INC. BROOME AREA-CHAPTER

The following members of Broome Area Chapter were elected to office on January 11, 1938:

W. W. Perry, President, 76 Cleveland Ave., Binghamton, N. Y.
Harold Lauder, Vice-president, 306 East Main St., Endicott, N. Y.
R. S. Barton, Secretary-treasurer, 6 Westerly Way, Binghamton, N. Y.
Walker Lounsberry, Director, 3 years, 11 Ester Ave., Binghamton, N. Y.
James H. Thomas, Director, 3 years, 16 Dietz St., Oneonta, N. Y.

The regular meeting of the Bronx County Chapter, New York State Society of Professional Engineers, was held at the Concourse Plaza Hotel, 161 Street and Grand Concourse, Bronx, January 6.

A lecture on the subject of POLARIZED LIGHT was given by:

ENGINEER NICHOLAS C. MANDRAGOS

While Polarized Light has been known for a long time it is only in recent years that great strides have been made with regards to its applications. Engineer Mandragos showed for the *first time* how Polarized Light may be used in a Third Dimensional manner.

CHAPTER BUSINESS

The Legislative Committee—reported on its findings in reference to the new form to be made out by Engineers for the Department of Taxes & Assessments.

The Unemployment & Age Discrimination Committee—The serious work of this committee has focussed attention on the Chapter and we have been invited by Assemblyman JAMES J. WADSWORTH to discuss the matter before a hearing on the subject.

The Chapter Activities Committee's arrangement for a Bowling Night proved very successful and a most enjoyable evening was spent at the Poe Recreation Center. Another evening is being arranged and it is hoped that more will avail themselves of this opportunity for social contact.

The Publicity Committee—has the Bronx Chapter's Boro-wide Essay Contest well in hand. NOTE: Any member wishing to contribute to the Prize Fund for this Contest should get in touch with the Treasurer. The Chapter ruled that any amount up to $1.00 per member may be contributed.

The question of whether Bronx Engineering Students should be invited to attend our regular meetings was discussed.

Bronx County Chapter of the New York State Society of Professional Engineers has extended the time limit for submission of essays in its essay contest on the subject "What Civic Improvement Would You Propose As the Most Beneficial for the Borough of the Bronx" until midnight of March 31, 1938, according to Joseph B. Diamond, Chairman of the Essay Contest Committee.

Many students requested a further extension of time due to the fact that school examinations at this time of year demand their close attention. It is felt that the extension will afford an opportunity to compete to many who could not otherwise find time enough for proper consideration of the topic.

CHANGE OF ADDRESS

If the address at which you receive your AMERICAN ENGINEER has been changed, notify the Executive Secretary (*not* the Editor) without delay!

—Don't Forget—

All notices of change of address should be sent promptly to:

WILLARD S. CONLON
Executive Secretary
National Press Building
Washington, D. C.

MISSOURI

JEFFERSON CITY HOST TO TWO HUNDRED ENGINEERS FOR 2D AREA MEETING

Dr. D. B. Steinman, Founder of Society, Speaks on "Organizing Engineers"

"The public hardly realizes that engineering is a profession. When the average man hears the word 'engineer,' he does not know whether it refers to a Gen. Goethals or to a Casey Jones."

In these words, Dr. D. B. Steinman characterized the situation which is being met by the National Society of Professional Engineers, of which he is the founder and a past president.

In a meeting held in the House of Representatives, in the Capitol building, on January 14, two hundred members and friends of the Missouri Society heard Dr. Steinman relate the reasons for the organization of the National Society and the ultimate aims of the group.

Dr. Steinman said the outstanding factor in the progress of the human race has been the engineer, and yet in the minds of laymen, public officials, and legislators, the rightful place of the engineer is unknown. In point, he said, "Again and again, it has occurred that when some public planning commission has been appointed and the suggestion made that in addition to the business men and the lawyers there should be engineers on the commission that plans and builds, the reply has come back that we can hire all the engineers we need for a song, and we need these business men and bankers to tell the engineers what to do."

This situation is being corrected by the National Society of Professional Engineers, Dr. Steinman related, and cited the recent establishment of the new City Planning Commission in New York City with a representative of the engineering profession as a member.

The one means of organizing engineers and gaining recognition is through registration and licensing. The first state to adopt such laws was Wyoming, in 1907. There are now 38 states that have license laws, Missouri being one of the ten not having registration.

The obvious result of this condition is the emigration of unfit practitioners from the states which have set up standards into those that have no legal recognition of the profession.

The steps that are necessary to bring the profession to the status on which it belongs were outlined by Dr. Steinman. First, there must be a law which establishes the profession as a legal entity and furnishes it with the police power of the state to protect the profession and to insure the public of high standards of practice. Second, there must be a strong society to enforce and improve the law within the state. And third, there must be a national society to unify and strengthen the organization throughout the nation.

Dr. Steinman cited the disorganization of the profession by saying that there are now ninety national engineering societies that claim to be made up of engineers. Out of all these societies, the National Society of Professional Engineers and its member state societies are the only ones that require a member to be an engineer. In states that have registration, this is governed by the holding of a license. In those states that do not have registration, qualifications are set up which are equal to the requirements of registration laws in other states.

Dean F. Ellis Johnson, College of Engineering, Columbia, and Director W. R. Chedsey, School of Mines, Rolla, spoke briefly on the program. E. W. Carlton, President of the Society, presided.

SOCIETY SUPPORTS FEDERAL AID FOR HIGHWAY WORK

The fifteen Members of Congress from Missouri were notified of the attitude of the Missouri Society in a resolution on Federal Highway Aid prepared by the Executive Board.

The resolution stated in effect that the present favorable condition of the highway industry was due to the effect of the Federal Highway program and that its continuance on the present basis would be important in maintaining employment in engineering and in all allied branches of highway construction.

Most of the Congressmen replied with statements of their position on the program and indicated their belief in the wisdom of the policy and their intention of supporting it.

NORMAL GROWTH OF SOCIETY REPORTED BY SECRETARY

In a report to the Executive Board meeting held in Jefferson City, January 14, the secretary reported the membership had reached a total of 330. This was an increase of 41 since the last report in October. As this goes to press, the membership stands at 340, which indicates a little better than normal growth based on estimates made last fall in anticipating a budget.

These estimates were considered conservative at the time and even normal growth is below the rate which is necessary for early effectiveness of the Society.

ETHICS AND PRACTICE

The Committee on Ethics and Practice, under the chairmanship of Engineer F. W. Green, reported a proposed code of ethics to the Executive Board for consideration. This will be passed on by the Board and then submitted to the membership for adoption.

ONE HUNDRED AND THREE MEMBERS ATTEND DINNER TO HONOR DR. STEINMAN

Overflow Crowd Descends on Jefferson City and Taxes Capacity of Dining Room

What was intended at first to be a small, informal dinner to honor Dr. Steinman, guest speaker at the Second Area Meeting, and to entertain out-of-town members outgrew all expectations and taxed the resourcefulness of the committee in charge of arrangements.

With returns from the reservation cards indicating a possible attendance of eighty, the committee made its plans and arrangements only to find at 6:00 p. m., that the good weather and the eminent speaker had enticed a large number to drive from distant places to take part in the meeting and attend the dinner.

When the word was finally given at 6:30 that the crowd could be seated, there were 103 places filled. The crowding and delay resulting from this overflow was taken in all good humor and pleasant fellowship prevailed. It certainly sets a standard for other meetings.

STRIKING WAITERS GIVE COMMITTEE A HEADACHE

Friends of Engineer Barton in the Bureau of Bridges had considered playing a practical joke on him to add to his worries in connection with the arrangements of the meeting held in Jefferson City. Before they could play their hand, though, reality stepped in and played a meaner trick on the hard working committee chairman when the waiters at the Missouri Hotel went out on strike Friday morning, the day of the scheduled dinner.

Plans and arrangements had been made to hold the dinner at the Missouri and the walkout presented a real emergency for Barton to handle. He solved the problem only to have a record crowd descend upon him at the quickly arranged dinner at Petit's.

He was "happy about the whole thing" when we last saw him.

ADVERTISING

The News Letter has been changed to *The Missouri Engineer* and it is planned to accept all legitimate advertising to help defray the costs. Rates and specifications may be had upon request to W. H. McDill, 208 Merchants Bank Bldg., Jefferson City, Missouri.

ENGR. DODD BACK AT WORK

Engineer L. H. Dodd, who suffered severe injuries in an auto wreck in November, attended the meeting in Jefferson City and acted as host to Dr. Steinman. We were all glad to see Dodd on his feet and hope he will soon be completely recovered.

ACADEMY TO HEAR ENGINEERS

The Missouri Academy of Science will hold its annual meeting at Rolla on April 21-23 and the engineer section, under Engineer E. W. Carlton, will hear papers read by practicing engineers instead of by teachers as in the past. This is an innovation that promises to bring out interesting points.

NATIONAL DUES

National Members in Missouri recently received statements of dues for 1938. It is urged that these be paid promptly so that they can be transmitted to Washington. The effect and benefit of the National Society is needed in Missouri.

WHICH WILL BE FIRST?

A very necessary part of the structure of the Missouri Society is the chapter group. It is about time a chapter was being organized, and we wonder which group will be first.

REGISTRATION APPLICANT

The secretary recently received an application for registration from an engineer in Texas. Shall we hold it and give him No. 1 license?

Fire broke out in the homes of Engineers Adams and Brasfield almost simultaneously. The two houses are situated in opposite sides of Jefferson City, and the fire departments had to work fast to save them.

MISSOURI DUES

Members of the Missouri Society who were delinquent in dues on January 1, have been billed for the balance. Please clean up these accounts so that the Society can go forward with its work.

NEW MEMBERS

Fourteen new members have been accepted since January 1. They are as follows:

Fred C. Lenz, Rolla.
A. T. Smith, Rolla.
D. R. Stover, Kirkwood.
J. S. Johnson, Rolla.
O. H. Manchester, Jr., Webster Groves.
C. W. Gray, Jefferson City.
Elmer H. Gardner, Jefferson City.
G. F. Hord, Kirkwood.
Joe E. Jesse, Webster Groves.
Mitchel Hall, Jefferson City.
Chas. C. Segall, St. Louis.
Carrol R. Forbes, St. Louis.
Rex. E. Pinkley, Carthage
Chas. C. Tevis, Kirkwood.

NEWS OF ENGINEERS

A. H. Baum, Jr., reports a change of address to 3159 Allen Ave., St. Louis, Missouri.

B. H. Rucker, Jr., is now located at Joplin, Missouri.

R. F. Powell reports a change of address to 511 Goethe, Kirkwood.

It is reported that R. S. Rucker has been forced by ill health to give up work for several months. We hope that he will be back on the job soon and boosting the Society in the St. Joseph region.

The Missouri Highway Engineers Association held its annual meeting in Kansas City, February 16-17-18.

NEBRASKA

Nebraska Engineers' Registration Law Legislation Bill No. 14

INTRODUCED BY LESTER L. DUNN OF LANCASTER, A. L. MILLER OF KIMBALL, L. B. MURPHY OF SCOTT BLUFF, E. M. VON SEGGERN OF CUMING, AMOS THOMAS OF DOUGLAS, ERNEST A. ADAMS OF DOUGLAS AND JOHN KNICKREHM OF HALL.

AN ACT relating to public convenience and welfare; to regulate the professional practice of engineering and architecture, creating the State Board of Examiners for Professional Engineers and Architects, providing for the necessary funds to defray the expenses thereof; and providing penalties for the violation of this Act.

Be It Enacted by the People of the State of Nebraska:

Section 1. In order to safeguard life, health, and property, any person practicing or offering to practice the profession of engineering or architecture in this state shall hereafter be required to submit evidence that he is qualified so to practice and shall be registered as hereinafter provided; and after January 1st following the passage of this Act it shall be unlawful for any person to practice or to offer to practice the profession of engineering or architecture in this state, unless such person has been duly registered or is exempted under the provisions of this Act.

Sec. 2. The term "Professional Engineer" as used in this Act shall mean a person who, by reason of his knowledge of mathematics, the physical sciences, and the principles of engineering, gained by education and experience, is qualified to engage in engineering practice as hereinafter defined. The practice of professional engineering within the meaning and intent of this Act includes any professional service such as consultation, investigation, evaluation, planning, design, or responsible supervision of construction, in connection with any public or private utilities, structures, buildings, machines, equipment, processes, works or projects, wherein the public welfare, or the safeguarding of life, health or property is concerned or involved, when such professional service requires the application of engineering principles and data. The practice of professional engineering does not include the services ordinarily performed by those commonly designated as locomotive, stationary, and marine engineers, or power plant engineers, or manufacturers who supervise the operation of, or who operate machinery or equipment, or who supervise construction within their own plant. The term "Professional Architect" as used in this Act shall mean a person who, by reason of his knowledge of the principles of architectural design and construction gained by education and experience, is qualified to engage in the practice of Architecture. The terms professional engineer or architect shall not include superintendents, foremen, inspectors or building trades craftsmen, when performing their customary duties. Any one or combination of the following practices shall constitute the practice of architecture; namely consultation, investigation, evaluation, except real estate appraisals, planning, designing, or supervision of the construction and erection, enlargement or alteration of any building or buildings, or of any appurtnances thereto, to be constructed for others. A building is any structure consisting of foundation, floors, walls, columns, girders, and roof or a combination of any number of parts, with or without their parts or appurtenances.

Sec. 3. A State Board of Examiners for Professional Engineers and Architects, hereinafter called the Board, is hereby created, whose duty it shall be to administer the provisions of this Act. The Board shall consist of five (5) members, all of whom shall be appointed by the Governor within sixty (60) days after the passage of this Act. The members of the first Board shall be appointed to serve for the following terms: One member for one (1) year, one member for two (2) years, one member for three (3) years, one member for four (4) years, and one member for five (5) years, the said terms ending on the last day of February of the succeeding years. On the expiration of each of said terms, the term of office of each newly appointed or reappointed member of the Board shall be five (5) years and shall terminate on the last day of February. Three members of the Board shall be Professional Engineers and two members shall be Professional Architects. Each member shall hold office after the expiration of his term until his successor shall be duly appointed and qualified. The Governor may remove any member of the Board for misconduct, incompetency or neglect of duty. Vacancies in the membership of the Board, however created, shall be filled for the unexpired term by appointment by the Governor.

Sec. 4. Each member of the Board shall be a citizen of the United States, not less than thirty-five years of age, and a resident of the State of Nebraska for at least one year immediately preceding his appointment. Each member shall have been engaged in the active practice of engineering or architecture for at least ten (10) years and shall have had responsible charge of work for at least five (5) years at the time of his appointment. Each member shall be a registered Professional Engineer or Architect: Provided, that each member of the Board first appointed shall receive a certificate of Registration from said Board. Each member of the Board shall receive as compensation not more than Ten Dollars ($10.00) per day for each day actually spent in traveling to and from and while attending sessions of the Board and its committees, and each member shall also receive all necessary expenses incident to the performance of his duties under this Act.

Sec. 5. Each member of the Board shall receive a certificate of appointment from the Governor, and before beginning his term of office he shall file with the Secretary of State the constitutional oath of office. The Board or any committee thereof shall be entitled to the services of the Attorney General, in connection with the affairs of the Board, and the Board shall have power to compel the attendance of witnesses, may administer oaths and may take testimony and proofs concerning all matters within its jurisdiction. The Board shall adopt and have an official seal which shall be affixed to all certificates of registration granted, and shall make all by-laws and rules, not inconsistent with the law, needed in performing its duty.

Sec. 6. The Board shall hold a meeting and organize within thirty (30) days after its members are first appointed, and thereafter shall hold at least one (1) regular meeting each year. Special meetings shall be held as the by-laws of the Board may provide and at such places as the Board may elect. Notice of all meetings shall be given in such manner as the by-laws may provide. The Board shall elect annually at its first meeting after March first, from its members, a chairman, vice-chairman and secretary. A quorum of the Board shall consist of not less than three (3) members.

Sec. 7. The Secretary of the Board shall receive and account for all moneys derived from the operation of this Act, and shall pay them to the state Treasurer, who shall keep such moneys in a separate fund to be known as the "Professional Engineering and Architectural Examiners Fund", which shall be continued from year to year and shall be drawn against only for the purpose of this Act as herein provided and, when reappropriated for the succeeding biennium shall not revert to the general fund. All expenses certified by the Board as properly and necessarily incurred in the discharge of duties, including authorized compensations and clerical help, and any expense incident to the administrations of this Act relating to other states, shall be paid out of said fund. Warrants for the payment of said expenses shall be issued by the Auditor of Public Accounts and paid by the state Treasurer upon presentation of vouchers regularly drawn by the Chairman and Secretary of the Board and approved by the Auditor of Public Accounts: Provided, however, that at no time shall the total amount of warrants exceed the total amount of the fees collected under this Act, and to the credit of said fund.

Sec. 8. The Board shall keep a complete record of all its proceedings. A roster showing the names and places of business of all

registered Professional Engineers and Architects shall be prepared by the Secretary of the Board during the month of December of each year, commencing one year from the date this law becomes effective. Copies of this roster shall be available to each person so registered, placed on file with the Secretary of State, and furnished to the public on request. On or before the 31st day of December of each year the Board shall submit to the Governor a report of its transactions for the preceding year, and shall file with the Secretary of State a complete statement of the receipts and expenditures of the Board, attested by the affidavits of the Chairman and Secretary.

Sec. 9. At any time within one year after this Act becomes effective upon due application therefor and the payment of a registration fee of Fifteen Dollars ($15.00), the Board shall issue a certificate of registration, without written or oral examination, in Engineering or Architecture, to any professional engineer or architect who shall submit evidence, under oath, to the Board that he is of good character, has been a resident of the State of Nebraska for at least one year immediately preceding the date of his application. Said registration shall be subject to renewal from year to year as provided in Section 10 hereof.

Sec. 10. The Board shall, upon application therefore on a prescribed form and upon the payment of a fee of Fifteen Dollars ($15.00) to be paid in the manner prescribed below issue a certificate of registration. (a) To any person who submits evidence satisfactory to the Board that he is fully qualified to practice professional engineering or architecture; or, (b) To any person who holds a like unrevoked certificate of registration issued to him by proper authority of the National Council of State Board of Engineering Examiners or of the National Bureau of Engineering Registration, or of the National Council of Architectural Registration, or any state or territory of the United States or any country where the requirements for the registration of Professional Engineers or Architects are not lower than the standards specified in this Act: Provided, however, that no person shall be eligible for registration who is under twenty-five (25) years of age, or who is not of good character and repute, or who has not been actively engaged for at least eight (8) years in the practice of professional engineering or architecture of character satisfactory to the Board. The satisfactory completion of each year of an approved course in engineering or architecture in a school or college approved by the Board as of satisfactory standing with or without graduation shall be considered as equivalent to a year of active practice. Graduation in a course other than engineering or architecture from a college or university of recognized standing shall be considered as equivalent to two (2) years of active practice: Provided, that no applicant shall receive credit for more than four (4) years of active practice because of educational qualifications. The following shall be considered as minimum evidence satisfactory to the Board that the applicant is fully qualified to practice professional engineering or architecture: (a) Graduation, after a course of not less than four (4) years in engineering or architecture from a school or college approved by the Board as of satisfactory standing, and an additional four (4) years of practice in engineering or architectural work which indicates that the applicant is competent to be placed in responsible charge of such work, or (b) Successfully passing a written, or written and oral, examination designed to show knowledge and skill approximating that attained through graduation from an approved four year engineering or architectural course and a specified record of eight (8) years or more of active practice in engineering or architectural work of a character satisfactory to the Board and indicating that the applicant is competent to be placed in responsible charge of such work. At any time within five (5) years after this Act becomes effective, the Board may accept as evidence that the applicant is qualified for registration as a Professional Engineer or Architect; a specific record of twelve (12) years or more of active practice in engineering or architectural work of a character satisfactory to the Board and indicating that the applicant is qualified to design or to supervise construction of engineering or architectural work and has had responsible charge of such work for at least five (5) years and provided that applicant is not less than thirty-five (35) years of age. The initial fee required for filing an application shall be the sum of Ten Dollars ($10.00), and if the applicant is found to be qualified he shall be given a certificate of registration and a seal upon payment of the additional fee of Five Dollars ($5.00). The candidate failing an examination may, after an interval of not less than one (1) year nor more than two (2) years, be examined again without additional fee. Should the Board deny the issuance of a certificate of registration to any applicant, the initial fee deposited shall be retained. Certificates of registration shall expire on the last day of the month of December following their issuance, or renewal, and shall become invalid on that date unless so renewed. The annual fee shall be not less than Three Dollars ($3.00), nor more than Five Dollars ($5.00) as the Board shall direct. The fee to be paid for the renewal of a certificate after the last day of December shall be increased Thirty Cents ($0.30) for each month or fraction of a month that payment for renewal is delayed, provided, that the maximum fee for a delayed renewal shall not exceed Six Dollars ($6.00), and that no renewals shall be made after a lapse of one year.

Sec. 11. The Board shall suspend or revoke the certificate of any Engineer or Architect who is found guilty of deceit in obtaining a certificate, or of any fraud, gross negligence, incompetency, or misconduct in the practice of engineering or architecture as defined in this bill. Any person may prefer charges of such fraud, deceit, gross negligence, incompetency, or misconduct against any Engineer or Architect registered hereunder; such charges shall be in writing and sworn to by the complainant, and submitted to the Board. Such charges, unless dismissed without hearing by the Board as unfounded or trivial, shall be heard and determined by the Board within three (3) months after the date on wich they were preferred. A time and place for such hearing shall be fixed by the Board. A copy of these charges, together with a notice of the time and place of hearing shall be served personally or by registered mail, return card requested, on the accused at least thirty (30) days before the date fixed for the hearing, and in the event that such service cannot be affected thirty (30) days before hearing, then the date of the hearing and determination shall be postponed as may be necessary to permit the carrying out of this condition. At said hearing the accused shall have the right to appear personally and by counsel and to examine witnesses against him and to produce evidence and witnesses in his defense. If, after said hearing, four (4) or more members of the Board vote in favor of finding the accused guilty, the Board shall suspend or revoke the certificate of the accused. The Board, for reasons it may deem sufficient, may reissue a certificate of registration to any person whose certificate has been revoked, if four (4) or more members of the Board vote in favor of such re-issuance. A new certificate, to replace any certificate revoked, may be issued, subject to the rules and regulations of the Board. A charge of Ten Dollars ($10.00) shall be made for such issuance. A new certificate, to replace any certificate lost, destroyed or mutilated, may be issued, subject to the rules and regulations of the Board. A charge of Three Dollars ($3.00) shall be made for such issuance.

Sec. 12. The issuance of a certificate of registration by the Board shall be evidence that the person named therein is entitled to all rights and privileges of a Registered Professional Engineer or Architect, and that the recipient thereof is admitted to the practice of professional engineering or architecture in this state while the said certificate remains unsuspended, unrevoked, or unexpired. The Board shall provide for each person registered hereunder a seal bearing the registrant's name and the legend "Registered Professional Engineer," or "Registered Professional Architect," or both. Plans, specifications, plats and reports issued by a registered Professional Engineer or Architect may be stamped with his seal during the life of his certificate, but it shall be unlawful for anyone to stamp or seal any documents with a seal after the certificate of the registrant named thereon has been suspended, revoked or has expired.

Sec. 13. Any person who shall practice, or offer to practice, the profession of engineering or architecture in this state without being registered or exempted in accordance with the provisions of this Act, or any person presenting or attempting to use as his own the certificate or registration or the seal of another, or any person who shall give any false or forged evidence of any kind to the Board or to any member thereof in obtaining a certificate of registration, or any person who shall falsely impersonate any other registrant of like or different name, or any person who shall attempt to use an expired, suspended or revoked certificate of registration, or any person who shall violate any of the provisions of this Act, shall be deemed guilty of a misdemeanor, and upon conviction thereof, shall be sentenced to pay a fine of not more than One Hundred Dollars ($100.00), or suffer imprisonment in the county jail for a period not exceeding thirty days, or both.

Sec. 14. The following persons shall be exempt from the provisions of this Act, to-wit: (a) A person not a resident of and having no established place of business in this state, practicing or offering to practice herein the profession of engineering or architecture, when such practice does not exceed in the aggregate more than sixty days in any calendar year: Provided, such person is legally qualified by registration to practice the said profession in his own state or country in which the requirements and qualifications for obtaining a certificate of registration are not lower than those specified in this Act; or (b) A person not a resident of and having no established place of business in this state, or who has recently become a resident thereof, practicing or offering to practice herein for more than sixty days in any calendar

year the profession of engineering or architecture, if he shall have filed with the Board an application for a certificate of registration and shall have paid the fee required by this Act. Such exemption shall continue only for such time as the Board requires for the consideration of the application for registration; provided, that such a person is legally qualified to practice said profession in his own state or country, in which the requirements and qualifications for obtaining a certificate of registration are not lower than those specified in this Act; or (c) Any employee or a subordinate of a person holding a certificate of registration under this Act, or an employee of a person exempted from registration by Classes (a) or (b) of this Section; Provided, his practice does not include responsible charge of design or supervision; or (d) Officers and employees of the Government of the United States while engaged within the state in the practice of the profession of engineering or architecture for said Government; or (e) Neither shall anything contained in this Act prevent persons, mechanics, or builders from making plans, specifications for or supervising the erection, enlargement or alteration of buildings or any parts thereof to be constructed by themselves or their own employees for their own use: Provided, that the working drawings for such construction are signed by the authors thereof with a true statement thereon on their relation to such construction and that the makers are not Architects; nor shall this Act be construed as in any way affecting superintendents, inspectors, foremen or building trades craftsmen while performing their customary duties; or (f) Nothing contained in this Act shall be held or construed to have any application to the constructing, remodeling or repairing of any building or other structure outside of the corporate limits of any city or village, where such building or structure is to be, or is used for residential or farm purposes, or for the purposes of outbuildings, or auxiliary buildings in connection with such residential or farm premises; nor shall said Act apply to the constructing, remodeling or repairing of any privately owned potato cellars or residential or one-story commercial or industrial building or structure inside or outside of the corporate limits of any city or village unless such building or structure, or the remodeling or repairing thereof provides for the employment, housing or assembly of twenty or more ersons or covers over five thousand square feet of ground, and the construction cost thereof is twenty thousand dollars or more. (g) Nothing contained in this Act shall apply to the operation. maintenance, additions, reconstruction or repair of canals, laterals, ditches or distribution lines of Rural Public Power Districts, Public Power and Irrigation Districts, Mutual Canals, combined public power and irrigation companies, or private irrigation canals.

Section 15. A firm or a co-partnership or a corporation, or a joint stock association may engage in tbe practice of professional engineering or architecture in this state, provided such practice is carried on by persons registered under this Act.

Sec. 16. One year after this Act goes into effect it shall be unlawful for this state, or any of its political subdivisions, except as provided in Section 14 hereof, to engage in the construction of any public works involving professional engineering or architecture unless the plans and specifications and estimates have been prepared and the construction executed, under the immediate supervision of a Registered Professional Engineer or Registered Professional Architect: Provided, that nothing in this section shall be held to apply to any public work wherein the contemplated expenditure for the complete project does not exceed Ten Thousand Dollars ($10,000).

Sec. 17. The Legislature hereby declares that this Act is necessary for the public convenience and welfare, is remedial in nature and shall be construed liberally.

Approved, March 27, 1937.

PENNSYLVANIA

G. EDWIN PIDCOCK IS NAMED PRESIDENT OF VALLEY CHAPTER

Professional Engineers Hear Address by National Head of Society

From the *Easton Express*

G. Edwin Pidcock, consulting engineer, of Allentown, was elected president of the Lehigh Valley Chapter, National Society of Professional Engineers, at the annual dinner meeting held recently at the Elks club, Allentown. He succeeds H. L. Ramage, of Allentown. Approximately 100 members were present.

Arthur V. Sheridan, president of the National Society, engineer of the Bronx and recently appointed to the New York City Planning Commission, addressed the local meeting. He discussed licensing of the professional engineer and organization to improve the standards of the profession.

Importance of Licensing

Licensing, he said, has as its principal object the safeguarding of public welfare. One of the most important qualifications for the engineer, he said, is character, he urged that the character of an engineer be carefully examined before he is licensed. The engineer must have a real understanding of the humanities as well as complete understanding of mathematics, physics, chemistry, and the sciences, he said.

The organization of professional engineers seeks to parallel professional groups such as the Bar Association and the Medical Society in keeping the standards of the profession high. It seeks to aid juniors in becoming qualified, and is dedicated to eliminate incompetency from the profession.

Other Officers

Victor W. Anckaitis, engineer of Wilson Borough, was elected secretary of the group. The other officers elected: H. G. Payrow, of Lehigh University, vice-president; R. E. Huthsteiner, of the Pennsylvania Power and Light Co., treasurer; J. A. Gish, Jr., superintendent of Sandt's Eddy plant, Lehigh Portland Cement Co., State director; L. M. Fraivillig, assistant Bethlehem city engineer, and Hale Sutherland, of Lehigh University, directors for three years, Joseph B. Walker, of Allentown, attorney and engineer, and Joseph Morrow, of Catasauqua, chief engineer of the Fuller Company, continue as members of the board.

Pro. W. S. Lohr, of Lafayette College reported for the committee on ethics and professional practice and pointed out the work done during the last year.

The guests introduced by Mr. Ramage were T. W. Battin, executive secretary of the Pennsylvania Society of Professional Engineers; S. I. Sacks, national director, an attorney and engineer; and A. W. Townsend, treasurer of the State society. Officers of the Reading and Harrisburg societies also were present.

PENNSYLVANIA SOCIETY OF PROFESSIONAL ENGINEERS
LEHIGH VALLEY CHAPTER
SECOND ANNUAL PRESIDENT'S REPORT

Submitted by H. L. Ramage to Second Annual Meeting held in Allentown,

January 7, 1938.

1. *MEETINGS*

During the year of 1937 five regular meetings were held as follows:

Feb. 8, 1937 Sun Inn, Bethlehem. Dinner meeting with Col. C. E. Meyers, President of State Registration Board as speaker. Engineer Bruce M. Alexander, President of the Reading Chapter, and several other guests from Reading were also present.

April 2, 1937 Lafayette College, Easton. Business meeting. Routine business and plans for a membership drive were outlined to the members present.

May 13, 1937 Hotel Traylor, Allentown, Pa. Dinner meeting. F. H. Dechant, President of State Society guest speaker. Discussed policies of the State Society and announced plans for State Convention at Hershey in August.

Sept. 16, 1937 Hotel Traylor, Allentown. Dinner meeting. Guest speaker W. A. Beck, Bethlehem Steel Co. presented sound pictures on "Making Structural Steel."

Oct. 18, 1937 Sun Inn, Bethlehem. Dinner meeting. Reports on the National Convention by Prof. W. S. Lohr and Prof. H. G. Payrow. Nominating Committee elected to nominate officers for 1938.

In addition to the Chapter Meetings the Board of Direction held eight meetings at which time the routine business of the Chapter was conducted instead of conducting this business at regular meetings.

Your President, Secretary and several of the Directors attended a meeting of the Reading Chapter held in Reading early in the year, the State Convention in Hershey and the National Convention in New York.

2. *COMMITTEES*

A complete roster of the Committees for the year 1937 are as follows:

Administrative	*Meetings*
H. L. Ramage, Chairman	H. C. Roeder, Chairman
H. C. Roeder	H. L. Ramage
V. W. Anckaitis	R. E. Huthsteiner
G. E. Yundt	C. E. Lehr
J. B. Walker	*Entertainment*
Legislative	H. C. Roeder, Chairman
J. B. Walker, Chairman	G. W. Kidney
H. G. Payrow	T. H. Moyer
Lynn Perry	W. R. Schnabel

Membership
J. A. Gish, Jr., Chairman
H. T. Carter
R. E. Huthsteiner
L. M. Sraivillig
M. G. Hilpert
S. K. Evans
Ralph Stewart
R. T. Peppell

Publications
G. E. Yundt, Chairman
W. S. Lohr
L. M. Fraivillig
V. W. Anckaitis

Ethics & Practice
W. S. Lohr, Chairman
P. T. Frankenfield, Secretary
G. E. Pidcock
J. B. Walker
H. C. Roeder
C. E. Yundt

Auditing
L. M. Fraivillig, Chairman
G. W. Kidney
H. G. Payrow

The NOMINATING COMMITTEE elected at the October meeting was composed of J. B. Walker, H. L. Ramage, H. C. Roeder, G. E. Yundt and V. W. Anckaitis. The Committee elected J. B. Walker Chairman and prepared the slate of official nominees for office for the coming year.

3. *MEMBERSHIP*

The membership of the Chapter was increased from 56 to 72, or a 30% increase which is approximately 50% of the registered engineers available in the Lehigh Valley. This is probably the best record of any Chapter in the State. This is a challenge to the other Chapters. If the other Chapters equaled this record the membership of the State Society would be doubled at least.

4. *FINANCES*

As you no doubt know the Chapter receives from the State Treasurer $1.50 out of every $7.50 paid by each member. The Treasurer will report to you later that we have operated within our income and have a balance in the Treasury and have no outstanding bills.

5. *ACTIVITIES*

The activities of the Chapter during the year were confined mostly to increasing membership, and investigating and reporting to the State Registration Board the illegal use of the term "Engineer" by non-registered electricians, etc. in the Lehigh Valley. The Chairman of the Ethics and Practice Committee will give you a detailed report of the accomplishments along these lines.

6. *REMARKS*

As retiring President of the Lehigh Valley Chapter, I wish to express my sincere appreciation and thanks for the fine cooperation of all of the officers and Chapter members during the year. It is due to your efforts that our Chapter is still marching on.

It is my earnest wish that you will all accede the same unfailing support, assistance and kindly consideration to your new President, Engr. G. Edwin Pidcock.

As our only other living past President Engr. Lohr said last year, I too would be doing a great injustice if I failed to mention our Secretary-Treasurer Engr. Anckaitis who has been the backbone and bulwark of your President and has done most of his work. But each and every member of the Board of Direction has also contributed his due share and I hereby extend my everlasting thanks to you all.

7. *RECOMMENDATIONS TO INCOMING OFFICERS*

a. Continue efforts to increase membership so that at least 75% of the registered Engineers in the Lehigh Valley became affiliated with our Society.

b. Increase our efforts to encourage and help the many qualified engineers to become registered.

c. Assign more work to the Committees so that a larger number of men will participate in the activities of the Chapter.

d. Obtain more publicity in the local papers *and in the "American Engineer."*

e. Continue supporting and encouraging the Ethics and Practice Committee in its work against illegal practices and illegal use of the word "Engineer".

f. Through the Legislative Committee continue striving for amending or improving the Registration Law in order that it may be better enforced.

g. Advocate and cooperate with the State Society to form additional County Chapters.

h. We are now entering into the third year of the organization of our Chapter and there should be no let down in our enthusiasm and zeal. Let all of us then do our utmost to assist our newly elected officers to make our third year a milepost in the history of our organization, a year three times better than our second.

Pennsylvania Society of Professional Engineers Lehigh Valley Chapter

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Report of Ethics & Practice Committee for 1937
Submitted by
Wm. S. Lohr, Chairman
at Annual Meeting, Jan. 7, 1938

Mr. President:

Your Ethics and Practice Committee wishes to report that it has been active during the year in handling a number of cases involving alleged violations of the State licensing law. Act No. 415 of the Pennsylvania State Legislature approved the 6th day of May, 1927, states:—

"It shall be unlawful for any person to practice, or to offer to practice, the profession of engineering, in any of its branches, including surveying, in this Commonwealth, unless such person has been duly registered or exempted under the provisions of this Act."

This Act vested the power to issue licenses to properly qualified persons in a State Registration Board for Professional Engineers. It set forth the qualification and requirements for legal registration for both Professional Engineers and Surveyors, created the machinery for registration and provided penalties for violation of the provisions of the Act.

This Act has now been in operation over ten years. It does not meet the requirements of the profession perfectly and will probably be revised and strengthened in the near future. Your Committee feels, however, that the members of this Society should exert every possible effort in having this law obeyed partly for its effect in raising the standards of our profession, but primarily in the interests of the public good.

Your Ethics and Practice Committee has endeavored to pursue a conservative and careful policy in reporting alleged violations of the law. Such violations as may be submitted to our Committee are discussed fully by the members of the Board of Direction of the Chapter. If the Board deems that sufficient evidence has been submitted to warrant action the case is reported to the Secretary of the State Registration Board, who takes such action as she may deem appropriate. In most cases an exchange of letters between the Secretary of the Board and the alleged or actual violator of the law is sufficient to clear up the case, which frequently came about through ignorance concerning the law or misinterpretation of the law. If the case is sufficiently serious, or the alleged violator of the law refuses to cooperate with the Secretary of the Board, she will report the facts to the Registration Board which has the legal authority to prosecute the case should this action be deemed advisable.

I wish to publicly give credit here to the tactful and efficient manner in which Miss Rebecca J. Nickles, Secretary of our State Board, has handled the cases we have reported to her.

Your present Committee began its work one year ago. It inherited from the previous Committee nine cases and had added to these ten new cases during the year, making a total of nineteen cases. Of these, one case was reported so recently that no report concerning it may be made at this time. Of the remaining eighteen cases, eight have been satisfactorily closed, two have been tentatively closed, and eight are pending.

I shall not burden you with a recital of these cases. I shall, however, briefly mention several, using of course, fictitious names:

CASE 1—

Smith Construction Co., Allentown. Advertises as Contractors and Engineers. No Professional Engineer in organization.

While the State Law does not specifically deny the use of the term "Engineer" to those not properly qualified or registered under the law, your Committee maintains, and is being upheld by the State Board, that the use of the word "Engineer, Engineers, or Engineering" constitutes in fact an offer to do engineering work, which is specifically denied to any but duly registered or exempted persons or corporations.

Correspondence between the State Board and the Smith Construction Co., having proved unsatisfactory, the Board has turned this case over to the Law Enforcement Division of the Bureau of Professional Licensing for investigation and probable legal action. This case is, therefore, still pending.

CASE 4—

A. A. Doe & Co., Allentown. Advertised as Contractors and Engineers. When reported, the organization had no Registered Engineer. Correspondence with the Company resulted in Mr. Doe applying for registration as a Professional Engineer. Being amply qualified, Mr. Doe received his Certificate of Registration. The firm may now advertise legally as Contractors and Engineers. This case is closed satisfactorily.

CASE 11—

Jones & Jones, Welding Engineers, Easton, Pa. Does welding work of all kinds, but apparently not qualified as engineers. Case pending.

CASE 14—

Black Engineering Co., Allentown, Pa. Business—washing automobiles. Case pending.

CASE 15—

B. B. Brown, Inc., Easton, Pa. Electrical supplies. Listed in Telephone Directory under heading "Electrical Engineers". Correspondence resulted in the discontinuance of this listing. Case closed.

CASE 17—

G. G. Green, Bethlehem, Pa. Sanitary & Heating Engineer. Correspondence resulted in Mr. Green applying for registration as a Professional Engineer. Case tentatively closed.

CASE 20—

Carl K. Karl, Allentown, Pa. Electrical Contractor. Advertised as Electrical Engineer. Correspondence resulted in Mr. Karl's agreement to discontinue the use of the term "Engineer."

The foregoing constitute typical examples of the work of your Committee. We have worked carefully and have endeavored not to interfere with legal rights of any citizen or to endanger the right of any person to earn an honest and legitimate living. Our only endeavor has been to protect the constitutional interests and rights of licensed Professional Engineers and the licensed Surveyor.

In closing, I think it is only proper for your Committee to issue a warning to any who may be practicing engineering illegally in the Lehigh Valley. In the words of James Whitcomb Riley: *"the Gobbl-uns 'll git you Ef you don't watch out."*

Respectfully submitted,

Ethics & Practice Committee

P. T. Frankenfield — H. C. Roeder
G. E. Pidcock — G. E. Yundt
J. B. Walker — W. S. Lohr, Chairman

The Pennsylvania Society of Professional Engineers announce election of the following officers for 1938:

President, Alexander Hutchinson 608 S. Avenue, Wilkinsburg.

2d Vice-President—Harry L. Ramage, 141 N. 9th St., Allentown.

Director at Large—Robert Hall Craig, 222 North 3d Street, Harrisburg.

National Diector—Samuel I. Sacks, 921 Widener Bldg., Philadelphia.

Total of 155 ballots were cast.

The Harrisburg chapter of the Pennsylvania Society of Professional Engineers is sponsoring a three-day course in architectural concrete manufacture at the Civic Club the evenings of February 9, 10, and 11.

The chapter, at its annual meeting Monday night, installed Irvin H. Geiger as president; H. S. Mattimore, vice-president, and John M. Moltz, secretary and treasurer.

Directors for three-year terms are A. Bowman Snavely and Raymond C. Bobb.

Committee members include: Public relations and legislative, Robert Hall Craig, chairman; F. Herbert Snow, Ritchie Lawrie, Jr.; ethics and practice, Dr. Hubert C. Eicher, chairman; Guy Johnson, George P. Searight; membership, Allen F. Jones, chairman; Raymond C. Bobb and D. Paul Witmer; publicity, C. Frank Class, chairman; Robert Hall Craig, Hershey Miller; attendance and employment, R. S. Conrad, chairman; A. L. Dittmar, Maurice Glace; program, H. S. Mattimore, general chairman; February, March, April, C. Radford Berry, chairman; May, June, July, Hershey Miller, chairman; August, September, October, Guy Johnson, chairman; November, December, January, George H. Rahn, chairman.

The Harrisburg Chapter, Pennsylvania Society of Professional Engineers, at its annual meeting at the Harrisburger Hotel installed Irvin H. Geiger, consulting engineer, as president. He succeeds A. Bowman Snavely, chief engineer of the Hershey Chocolate Corporation.

Other officers were: Vice-President, H. S. Mattimore, chief of the Bureau of Tests, State Highway Laboratory, and secretary-treasurer, John M. Moltz, Lehigh Portland Cement Company; directors, three years, A. Bowman Snavely and Raymond C. Bobb, Carlisle, architectural engineer; public relations and legislative committee, Robert Hall Craig, consulting engineer, and Ritchie Lawrie, Jr., consulting engineer.

Ethics and practice, Dr. Hubert C. Eicher, engineering department, State Department of Public Instruction; Guy Johnson, Public Utility Commission, and George P. Searight, Carlisle borough engineer; membership, Allen F. Jones, engineer, State Department of Property and Supplies, chairman; Bobb; D. Paul Witmer, architectural engineer, Hershey Estates; publicity, C. Frank Class, structural engineer, chairman; Craig; Hershey Miller, highway department; attendance and employment, R. S. Conrad, Highways, chairman; A. L. Dittmar, Highways; Maurice Glace, Hershey; program committee, H. S. Mattimore, general chairman; February, March, April, C. Radford Berry, Chief Engineer, Public Utility Commission, chairman; May, June, July, Hershey, chairman; August, September, October, Guy Johnson, chairman; November, December, January, George H. Rahn, Assistant to Chief Bureau of Tests, Highways, chairman.

Robert Hall Craig recently was elected a State director for a three-year term.

The first meeting in Schuylkill County under the sponsorship of the Reading Chapter was held Wednesday, February 9th, at the Necho Allen Hotel, Pottsville, Pa.

PROGRAM

The Legal Aspects of Registration

By E. MacTroutman, Asst. Counsel for the P. & R. C. & I. Co., and member of the Schuylkill County Bar.

The Pennsylvania Society of Professional Engineers

By Engr. Fred H. Dechant, of Reading, Past President P. S. P. E., now Vice-President, National Society of Professional Engineers.

The National Society of Professional Engineers

By Engr. Robert Hall Craig, of Harrisburg, Past President Harrisburg Chapter P. S. P. E., now Editor of THE AMERICAN ENGINEER.

The Philadelphia Chapter of the Pennsylvania Society of Professional Engineers met at the Engineers Club, 1317 Spruce Street, Thursday, February 3, 1938, at 8 P. M. The speaker was Capt. C. W. Burlin, Corps of Engineers, Executive Officer, U. S. Engineer Office, Philadelphia. His subject: "The Army Engineer." M. L. Conneen, Pres.; H. F. Bamberger, Secy.

ALLONS

PENNSYLVANIA SOCIETY OF PROFESSIONAL ENGINEERS, PITTSBURGH CHAPTER

610 Maloney Bldg.,
309 Fourth Ave.,
January, 1938.

The places where Fourth Annual Convention, National Society of Professional Engineers, Pittsburgh, Pa., October, 1938, Pittsburgh Chapter Meeting, 8:00 P. M., January 20, 1938, Assembly Room, Fort Pitt Hotel. Subject: "The Department of Public Works" by Eng. Frank M. Roessing, Director of Public Works, City of Pittsburgh.

* * *

EDITORIAL

Registration Act for Professional Engineers. Act of the General Assembly No. 415, approved May 6, 1927.

"Section 1. Be it enacted, etc., That in order to safeguard life, health, and property, any person practicing, or offering to practice, the profession of engineering in any of its branches, including surveying, shall hereafter be required to submit evidence that he or she is qualified so to practice, and shall be registered as hereinafter provided; and it shall be unlawful for any person to practice, or to offer to practice, the profession of engineering in any of its branches, including surveying, in this Commonwealth unless such person has been duly registered or exempted under the provisions of this Act," etc.

Section 10 consists of 6 sections covering six exemptions in simple language as follows:—

(a) A person who is a resident and having an established place of business in the State and who has filed and paid the fee and awaits consideration of his application for registration.

(b) A person who is not a resident of the State nor having an established place of business in the State but is qualified by registration to practice in his own state or county provided requirements or qualifications are equal or greater than those of this State, is exempted for thirty day practice during the year.

(c) A person during period of obtaining his registration if a nonresident.

(d) An employee of a person holding a certificate of registration or an employee of an exempted person *provided, such practice does not include responsible charge* of *design* or *supervision.*

(e) Officers and employees of the Government of the United States (Notice, this is the United States Government. This does not include State, County, City, Borough, Township or other Sub-divisions, Boards, Commissions, etc., of this State or its parts.)

(f) Regular employees of a public service company as defined in the Public Service Company Law, so long as such person is thus actually and exclusively so employed, and no longer, Provided, That such company shall have at least one engineer, registered under the provisions of this Act, in responsible charge of such company's engineering work in Pennsylvania.

The Society of Professional Engineers insists that all engineers shall accept the responsibility defined by this Act, and it also hopes to have the full cooperation of all public authorities, to the end that the responsibility of safeguarding life, health and property, be made the maximum. *This* was the purpose of the General Assembly in making this Act into law for this Commonwealth.

* * *

This month we are glad to introduce the following Engineers to the Chapter: H. S. Ayers, 303 City County Bldg., Pittsburgh; Cecil H. Barrett, 3315 Francisco St., Corliss Sta., Pittsburgh; Frederick B. Chalfant, 435 City County Bldg., Pittsburgh; Howard E. Dykeman, 301 Elizabeth Ave., Evans City; R. F. McKay, 148 Lincoln St., Uniontown, Pa.; I. Chas. Palmer, 320 N. Lang Ave., Pittsburgh; Louis T. Shannon, 809 Berkshire Ave., Pittsburgh; Carleton E. Stone, 610 Maloney Bldg., Pittsburgh; Joseph Stastny, Dept. Forest and Waters, Jamestown, Pa., (transferred from Philadelphia Chapter); Earl M. Vetter, 1006 Mager St., Pittsburgh; Karl R. Weber, 114 Montana St., N. S. Pittsburgh; Peter F. Loftus, 632 Oliver Bldg., Pittsburgh, (transferred from N. Y.); and William Espy McKnight, 1438 Dormont Ave., Pittsburgh, S. Hills Sta. Total Chapter membership, 147; members transferred, none.

IT COMES UP HERE

Fifteen members have signed a petition requesting an Amendment to the By Laws, making it mandatory that the nominating committee place two persons in nomination for each office to be filled in the future.

* * *

The Bureau of Labor Statistics in the Labor Department, Washington, D. C., have published a booklet entitled "Annual Income in Engineering Profession, 1929 to 1934" by Andrew Fraser, Jr., 1937, 15 p. il. (Serial No. R. 631)

This publication may be obtained free from the Labor Statistics Bureau, Labor Department, Washington, D. C. Chapter Secretaries note this, as it is of interest to you.

* * *

At the 2d Annual Meeting of the Pittsburgh Chapter, P. S. P. E. the following Chapter Officers were elected: President, Engineer Roswell Canfield; Vice-President, Engineer E. E. Appel; Directors, Engineer Earl S. Fenelon and Edward H. Stumpf.

* * *

The proposition to raise the dues of the Chapter was voted favorably therefore your total dues for 1938 will be $8.50 of which the local chapter will receive $2.50. Pay your dues, but this is not all; help carry on. The Chapter needs your personal guidance and attention.

At a meeting of the Philadelphia Chapter, Pennsylvania Society of Professional Engineers held January 6, 1938, the following Resolution was unanimously passed, with instructions to the Secretary to forward it to the Vice-President of the United States, the Speaker of the House of Representatives and to send copies to the National Secretary of the National Society of Professional Engineers and Congressmen representing the State of Pennsylvania:

RESOLUTION

WHEREAS, certain allotments of funds were authorized to be made to the several states of the United States in accordance with the Hayden-Cartwright Road Act of 1936; and

WHEREAS, the several states have allocated funds to match this Federal expenditure and have in the past matched this expenditure and have planned for the year 1939 to continue this highway work, and inasmuch as Congress did not take action previous to January 1, 1938 to cancel the 1939 Federal-Aid Program; and

WHEREAS, this program called for the expenditure of $195,000,000 of which $121,875,000 was for regular Federal-aid, $24,375,000 for secondary or feeder roads, and $48,750,000 for grade crossing elimination; and

WHEREAS, this money as well as the money with which the various states match it creates work on a large scale for engineers and allied employes; and

WHEREAS, Secretary Wallace under date of December 31, 1937 addressed letters to the several Governors of the states informing them that he was directed by the President to request the deferring of the submission of projects under the 1939 apportionment until Congress had an opportunity to further review this matter;

THEREFORE, BE IT RESOLVED, That the Philadelphia Chapter, Pennsylvania Society of Professional Engineers, does hereby go on record urging upon Congress that no curtailment be made of any Federal funds for highway purposes for the year 1939.

ENGINEERING IN THE PHILIPPINES

By Engineer Teofillo Reantillo

Engineering education in the Philippines is almost the same as that offered by our own American Universities although the opportunity to secure this education is rare to self supporting students.

During the American occupation of the Islands, thirty-nine years ago, there were few improvements and only the barest necessities for modern life existed. Lack of bridges, roads, and telephone lines made communication between even neighboring villages practically non-existent. Communities were self-supporting, natives spoke the dialect of their district and knew little of what transpired outside of their own sphere. Thus life in the Philippines continued until after the historic landing of Commodore Dewey in Manila Bay when a new civilization took hold, made education compulsory and developed the Islands to a plane of the other Nations of the World.

The Philippines of today present to the world a gigantic engineering achievement. Towns and villages are electrically lighted while the larger cities boast of modern water supply, sanitary disposal systems and electric surface transportation. Miles of improved highways traverse the islands and railroads are being developed yearly to extend further into the interior. The compulsory use of artesian water for cities without modern water supply system has successfully combatted the dreaded cholera.

The ultimate in engineering development is far from realized, however. Lack of facilities to store the aboudant rainfall of the wet season and its distribution by irrigation during droughts has resulted in the annual destruction of millions of pesos in crops. The cost of a fraction of the destruction would finance the construction of many dams and reservoirs. Many large rivers and water falls remain to be developed for electrical sources. The cost of steel in bridge and other construction is still exorbitant due to the lack of fabricating facilities for the country's many rich ore deposits, ore being exported to the United States for fabrication and imported as steel.

In Manila's sky line many five to eight story buildiigs are visible, the majority of reinforced concrete construction. These buildings designed with consideration of the empirical formulas to withstand wind pressure and earthquake shock hrave successfully withstood these two unknown factors. The limited variation of temperature has made negligible the coefficients of expansion of steel and concrete in building design. Frame construction is still chiefly used in most buildings due to its comparatively low cost, although lumber must be chemically treated to prevent termite destruction.

The cry of the Philippines is "Onward," its engineers will continue to develop this country rich in natural resources and it will take its place as a leader of western civilization in the far east.

CONSTRUCTION REACHES 6-YEAR PEAK

The amount of construction undertaken during 1937 reached a six-year peak. Total contracts awarded in the 37 eastern states attained the highest dollar value for any year since 1931, according to T. S. Holdon, vice-president of F. W. Dodge Corporation. In residential building, it is necessary to turn back to 1930 to find a total which can match the 1937 volume.

Contracts awarded in the 37 eastern states for 1937 amounted to $2,913,060,000, as reported today by F. W. Dodge Corporation. This total represents an increase of 9 per cent over the 1936 total of $2,675,296,000.

All classes of construction shared in the improved conditions during 1937 with the exception of public works. In the case of residential building, the 1937 total of $905,292,800 recorded a gain of 13 per cent over last year. This was the highest annual total for any year since 1930. Non-residential building amounted to $1,148,172,600 for 1937, an increase of 20 per cent over 1936. Public utility contracts totaled $277,730,100, a gain of 34 per cent over last year. For public works the 1937 total of $581,864,500 represented a 19 per cent loss from the 1936 volume.

THE ENGINEER IN WAR

(Continued from page 11)

bombs will add to the task and, as the army advances almost total destruction may be expected. The rate of advance will always depend upon the success of the infantry and the speed with which roads and bridges can be repaired for its supply.

For service with troops, previous experience in charge of construction gangs will be valuable. Ability to handle men and a natural gift of leadership will count for more than a high degree of technical training. With engineer troops recruited from all kinds of industry someone can always be found to suggest an answer to any question presented. The ability to apply ways and means available for completion of allotted task, within the time allowed and in all respects sufficient for the purpose intended, marks the true value of the engineer officer.

PROPOSED CONSTITUTION AND BY-LAWS FOR VIRGINIA

(Continued from page 8)

until their successors are chosen.

Section 2. All elections shall be by letter ballot. Ballots shall be mailed annually not later than November 1, and canvassed by the Executive Board not later than December 1.

Section 3. A plurality of all votes cast by ballot shall be necessary to elect to any office.

Section 4. Upon the death, resignation, or removal of any Officer or Director, the Executive Board may fill the vacancy until the next annual election.

ARTICLE XII

AMENDMENTS

Section 1. This Constitution may be amended by letter ballot provided, however, that such amendment shall have been presented to the Executive Board in writing and that, a majority of the Executive Board having approved of the amendment, it shall have been submitted to the Society for decision at least two weeks prior to the date set for the closing of ballots. A two-thirds affirmative vote, with not less than twenty per cent of the membership voting, shall be required to amend this Constitution or any part thereof.

Section 2. When a proposed amendment is presented to the Executive Secretary in writing and signed by ten per cent of the membership in good standing, approval of the Executive Board shall be unnecessary before submission to the Society, in accordance with Section 1 of this Article.

Section 3. Amendments to this Constitution shall become effective immediately, upon approval as provided in Section 1 of this Article.

"THOUGHTS THROUGH THE WEEK"

From the *Bronx Home News*

Sunday, January 2, 1938

The Mayor's selections for the City Planning Commission, the vastly important municipal body created by the new City charter, have won general commendation.

It was quite natural that, as chairman, he should have chosen a man thoroughly in sympathy with his own views of city planning and municipal government; one with whom he may expect to work in harmony.

The Mayor's "affinity of thought" with A. A. Berle, Jr., will not be held against the latter by the public as he assumes his new and great task. He has demonstrated satisfactorily by his past performances in the public service that he is fitted by ability and training for the post. He has shown himself to be an excellent and orderly organizer, something that the chairmanship of the Planning Commission can not do without.

To Bronxites, the naming to one of the commissionerships of Arthur V. Sheridan, Chief Engineer of the borough, is a cause for particular gratification.

His service in the Borough President's office has been long and distinguished; his work for community development, both within and outside the line of duty, has been ceaseless, intelligent and far-sighted.

In his own profession, recognition of his outstanding ability led to his election as president of the New York State Society of Professional Engineers and, subsequently, of the National Society.

The Bronx is proud that it is privileged to make so important a contribution to the new Commission.

The job confronting that organization is immeasurable, but at least, the personnel chosen for it assures it of a fine start in the right direction.

1937 HAD 10 PER CENT CONSTRUCTION GAIN OVER PRECEDING YEAR

The fourth year of construction industry recovery closed in the middle of a moderate recession, but with a definite gain over the preceding year, according to Thomas S. Holden, vice president in charge of Statistics & Research of F. W. Dodge Corporation. Recovery gains over 1936 were approximately as follows: an increase of 15 per cent in dollar volume of residential building; a dollar increase of 21 per cent in non-residential building; an increase of 40 per cent in public utilities construction; and a decrease of 20 per cent in public works construction.

From the point of view of ownership and financing, the program of the year 1937 showed a 34 per cent increase over 1936 in dollar volume of private building and engineering work, partially offset by a 15 per cent decline in public work of all kinds, resulting in a general construction volume increase of about 10 per cent. The final 1937 total for construction contracts awarded in the 37 Eastern States will be $2,900,000,000 or a little over, compared with $2,675,000,000 in 1936. Each month of 1937 through August gain over the corresponding month of 1936. Declines after August were very moderate: September contracts dropped 12 per cent below the preceding September; October contracts were 11 per cent under the preceding October; November contracts were 5 per cent under November 1936; advance figures for December 1937 indicate a contract volume equal to or slightly greater than the December 1936 volume.

The recession in construction has not, up to the present time, shown any indications of a depression of a major character. It has brought, however, a realization of the fact that rosy expectations of a rapidly rising speculative boom in the real estate and residential building had no foundation, and of the equally pertinent fact that the great potential market for residential building is in low-priced housing.

IMPORTANT NOTICE TO ALL ENGINEERS REGISTERED IN OREGON

The State Board of Engineering Examiners' attention has been called to numerous violations of the Engineers' Registration Law through engineers having failed to place their seals, or stamps, upon professional documents, including maps, plans, designs, drawings, plats, specifications, estimates and reports issued by a registrant as provided in section 68-1302, Oregon Code. Further complaint has been made that while the original drawing or tracing may have been properly sealed or stamped, and signed, blueprints from the same are made and filed with public officials, or otherwise used, which do not bear the seal, or stamp, but only the signature of the engineer, owing to the failure of the seal to blueprint. The Board requires all professional engineers to follow strictly the provisions of the statute regarding the use of their seals or stamps. It requires that the original of all reports, specifications, etc., and each sheet of the same, bear the seal, or stamp, and original personal signature of the engineer issuing such report or specification in order to avoid the possibility of substitution, or the changing of any portion of the same by an unauthorized person. The Board further requires that all copies of documents released also bear the proper seal, or stamp, and personal signature of the engineer responsible for the same. Some public officials will not accept documents which are not properly sealed, or stamped, and which do not bear the personal signature of the engineer responsible for the same.

Another matter that has been called to the attention of this Board is the socalled practice, by registered engineers, of "rubber-stamping" work done by unauthorized persons, or, in other words, the placing of a professional engineers' seal or stamp, and signature upon professional documents, including maps, plans, designs, drawings, plats, specifications, estimates and reports, which have been prepared by unauthorized persons without the direct personal supervision of the registered engineer so stamping and signing the same, thus aiding in the violation of the Engineers' Registration Law. If it is brought to the attention of the Board and proper proof is submitted, that any registered engineer as stamped, or sealed, and signed any professional document not prepared by himself, or under his direct personal supervision, and which he has not checked in every detail, or if he is not personally familar with the entire project concerned and any studies connected therewith, the Board will consider that such signing and sealing, or stamping, of said professional documents constitute fraud and deceit in the practice of engineering by said engineer and will revoke the certificate of said engineer.

F. D. WEBER,
President, State Board of Engineering Examiner.

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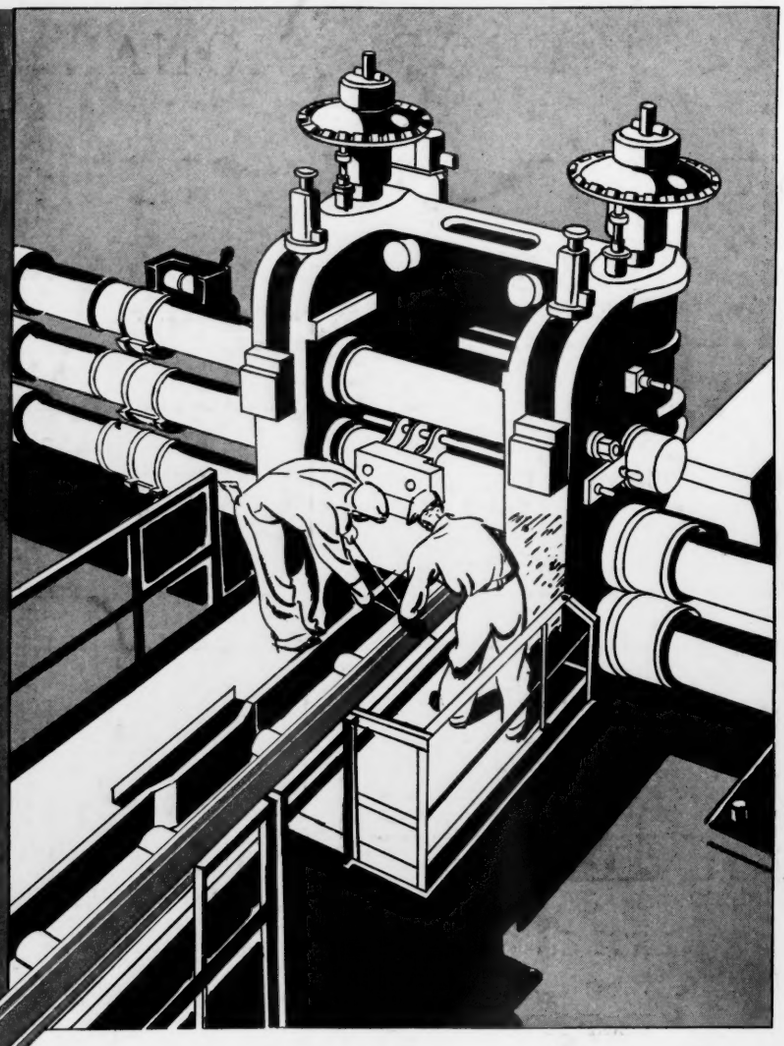

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